

MAY 1953

# Business

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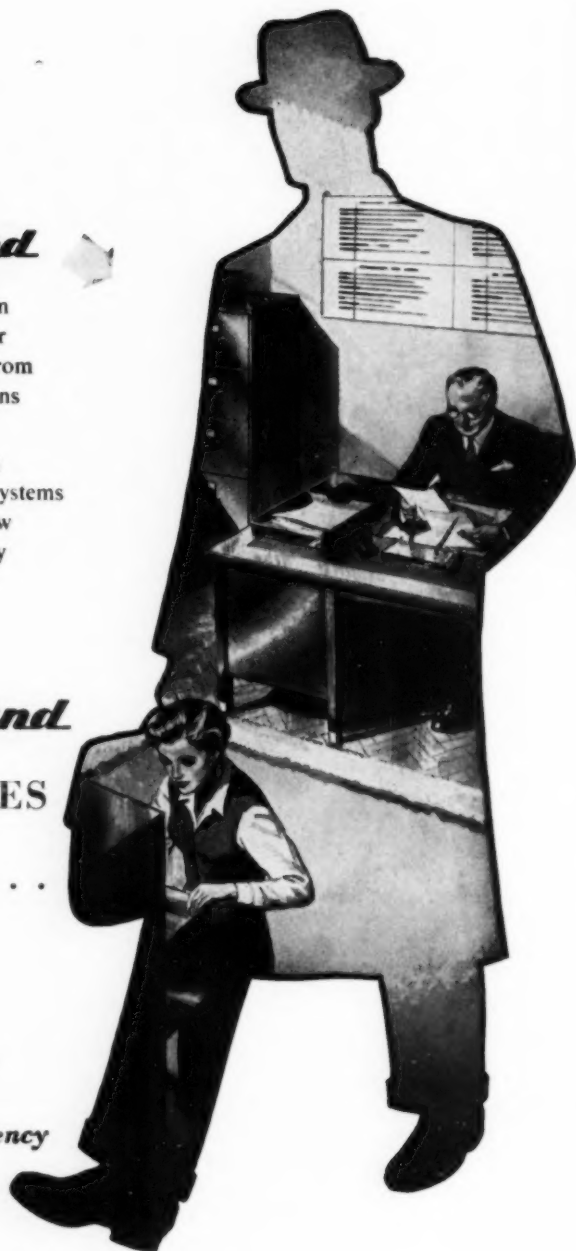
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BUSINESS, Vol. 88, No. 5 (Incorporating "The Magazine of Commerce," "Modern Business," "System," "Business Organisation and Management," "Business News Digest" and "British Industrial Equipment"). Published monthly by Business Publications, Ltd., 180 Fleet Street, London, E.C.4. CHAncery 844. 30/- a year post free U.K.; 35/- Overseas.

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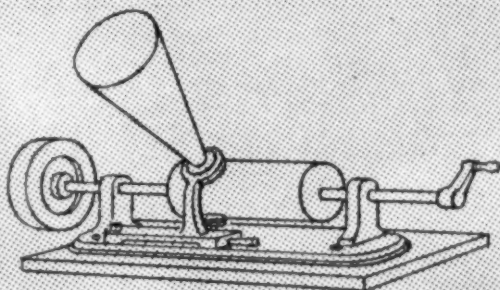
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BUSINESS



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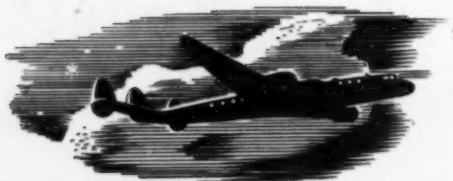
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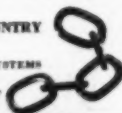
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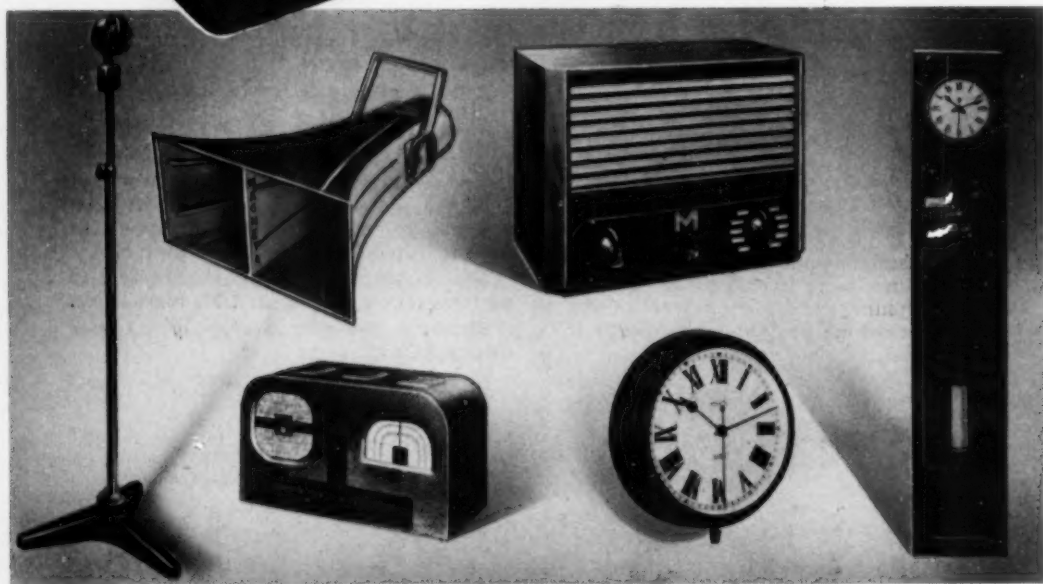
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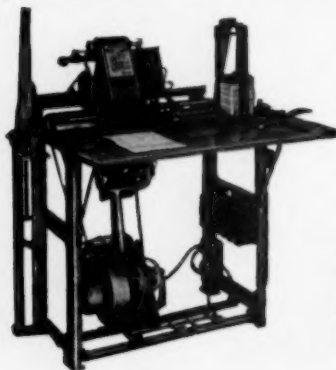
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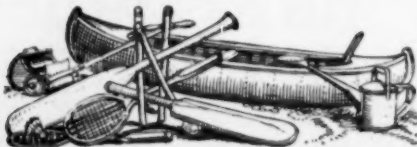


## May

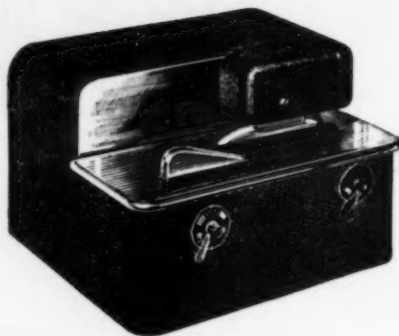
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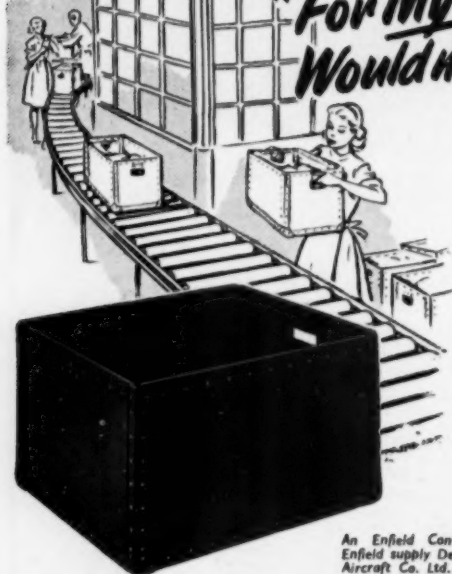
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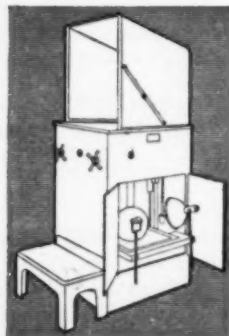
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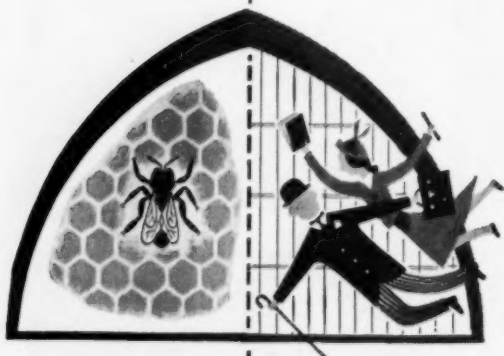


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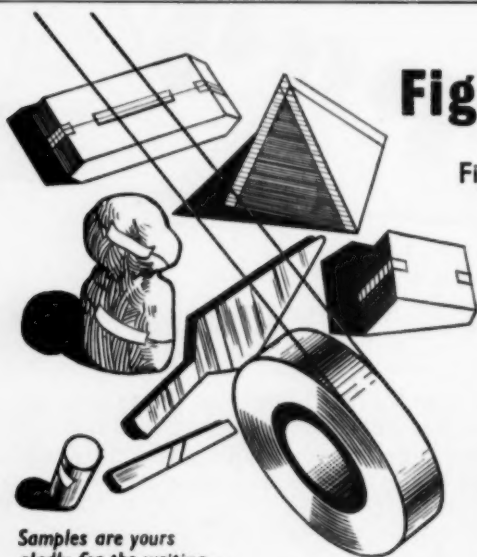
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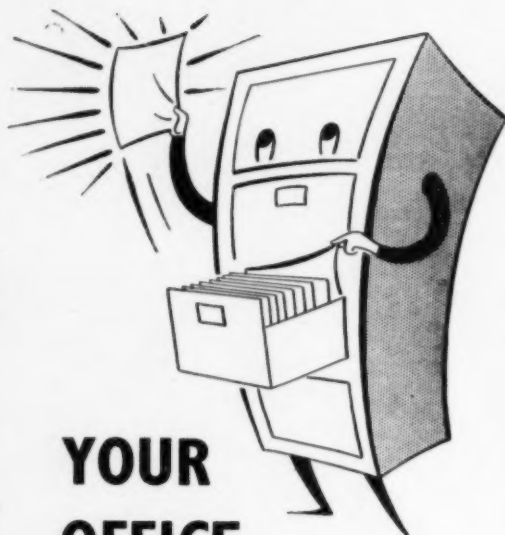
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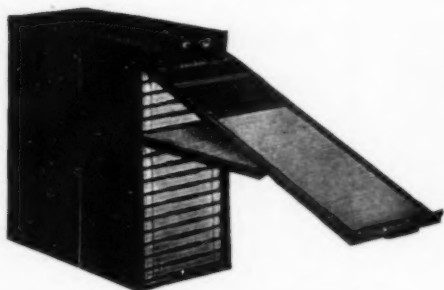
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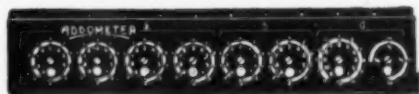
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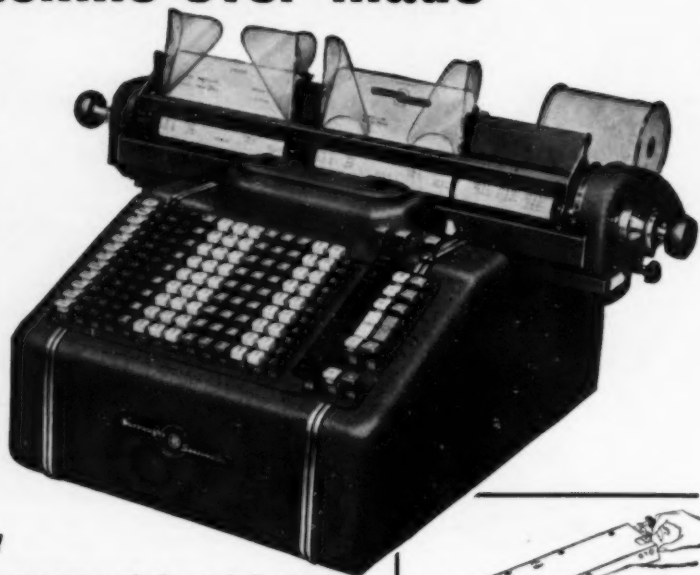
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## Home Market Boomlet is Here

London, April, 22 1953

### POST-BUDGET

### HIGHLIGHTS

### AND TRENDS

● Mr. Butler's bold budget for businessmen will certainly be a boon to the home market. The White Paper shows that home sales last year were down all round in volume, and in some items—clothing and household goods—even in money value. The first quarter of 1953 showed some recovery, but pre-Easter seasonal buying was disappointingly low.

● Main factor was high prices rather than lack of purchasing power, in particular potential customers were holding off to see what happened to purchase tax. Immediate cuts should set off a boom all round in radio and television, motor car and bicycle sales. Household goods, too, will benefit, though not directly clothing. Cut in jewellery and silverware may be too small to have much effect.

● Initial buying boom should last till June 7, when income tax cuts will give it another fillip. Restoration of initial allowances will help engineering industries on home orders throughout this year, and abolition of E.P.L. at end of year should bring further activity in 1954.

● But the success of these measures depends on two gambles—on whether private saving can be maintained, and on whether exports can be stepped up.

● Government expenditure is cut. But the deficit on capital account is still expected to be about £440m.—approximately the same figure as in 1952. Then, the Government was able to draw on funds from the Exchange Account and the Bank of England to meet this deficit. These will not be available this year. Hence the deficit must be met from savings.

● Last year, "business" savings amounted to £469m., against a deficit in 1951 of £915m. But this swing was largely due to the radical change in stock positions brought about by the slump. Whether increased incomes will provide sufficient extra savings to ward off inflation this year is anybody's guess. Mr. Butler's guess is that they will. He may be right. But if savings are not available, the only alternative is an expansion of bank credit—with corresponding inflationary effects.

● Labour is another factor in the inflation argument. Wages and salaries were up last year by 7 per cent., against 11½ per cent. in 1951. Inflationary impact of this rise was offset by a fall in profits of 7 per cent. If tax cuts reverse current falls in profits, wages may again become an inflationary factor. Current signs, too, are of a revival in wage increase claims, following a lull. Engineering unions are expected to produce a demand on April 29—a figure of 15 per cent. or £1 a week extra has been mentioned. Other unions in the queue include teachers, engineering draughtsmen and clerks, prison officers, and shop and distributive workers.

● The budget works both ways here. It provides no case for rises (food subsidies were carefully left untouched). But unions can say, "We can afford it." *Daily Herald*, April 15, headline: "Bonus for the Rich: Nothing for the Poor" suggests

*continued on following page*

### POST-BUDGET

### HIGHLIGHTS

### AND TRENDS

(continued)

another argument of which more will be heard. Fact that Woolworth and Marks & Spencer shares showed biggest post-budget rises should scotch this. On balance, however, sound statesmanship by government and moderate trade union leaders should avoid difficulties.

● Balance of payments position is more tricky. Last year, the 1951 deficit of £398m. was turned into a surplus of £291m.—a swing of £689m. Three factors caused this. The first was £120m. defence aid from the U.S. The second was a cut in imports that accounted for practically all the remainder. The third was an unexpectedly large improvement in the terms of trade, prices of imports fell much more than those of exports. We cannot expect such luck for two years running.

● Senator Taft has announced that foreign aid will be cut. The drop in imports was primarily in raw materials—and the trade recession had a more marked effect on these than the deliberate economies of Whitehall. Revival of production will mean a great demand for raw materials—and a greater expenditure on imports.

● Timing may be of vital importance here. Initial impact of tax cuts will be on the home market, export costs may not be radically cut until E.P.L. is abolished at the end of the year, or at any rate until new plant and machinery is installed and running. In the meantime, increased expenditure on materials may represent a drain on gold and dollar reserves.

● Trend in terms of trade needs watching. Prices of raw materials are still falling. Aluminium and copper are down £5 a ton, tin dropped £70 in a day, alcohol and other solvents are down 20 per cent., rubber is still falling. A few materials—steel and building materials—have risen as a result of last month's coal price increases, but rises are not large. General trend is still downwards—and peace talks in Korea may intensify it.

● This will help the British manufacturer to cut his costs in export markets. But it will also cut dollar receipts of rest of sterling area. And the recent recovery in gold and dollar reserves was bound up very closely with sales of Malayan rubber and tin. Net result for the economy may be adverse.

● Lost in the small print of the budget speech : seven important concessions on assessment :

- (a) A business loss can be carried forward one year and set off against other income.
- (b) Payments by a company to an associate company to make good a loss are recognised as an expense of the payer and a trading receipt of the payee company.
- (c) Postponement of capital allowances where double taxation relief is lost.
- (d) Tax payment on income arising abroad can be deferred if income cannot be remitted under local currency regulations.
- (e) Over-riding limitation on unilateral relief for overseas taxes extended to full amount of U.K. tax (now three-quarters for Commonwealth and half for other taxes).
- (f) Buildings of fishing and overseas husbandry or forestry industries are recognised as industrial buildings.
- (g) Improvement in tax arrangements on changes in partnerships.

● Mr. Butler's advisers were admittedly well out in last year's estimates. Reassuring note : 59 economists asked by the Royal Statistical Society to predict economic movements in 1953 forecast increased output (2.4 per cent.), exports (2.7 per cent. by volume) and personal incomes (0.8 per cent. at 1948 prices). Unemployment in 1953 would remain at 1952 levels, but retail prices would rise by 2.9 per cent. The economists had to answer before the budget or the Korea peace moves. But their 1952 forecasts were much closer than those of the Chancellor.

## SALIENT FIGURES OF THE MONTH

## Comment

**General economic recovery** is now reflected in most figures. Index of production (9) in January was still below January, 1952, but the December-January rise was 7 points, against 5 points last year. Note increase of 7 points in mining and quarrying index.

**Drop in February figures** is due almost solely to the short month. On a daily basis, output of most commodities was maintained.

**Unemployment (8)** showed a substantial drop. Figures were down all round, except in metals, engineering and vehicles.

**Bank deposits (28)** dropped sharply, but bank advances rose again to £1,869m. Main beneficiaries: iron and steel, engineering and public utilities.

**Average earnings** (all operatives) totalled 151s. 11d. for a 46.1-hour week in October, 1952, compared with 147s. 3d. for a 45.6-hour week in April, October, 1938, figures were 53s. 3d. for a 46.5-hour week.

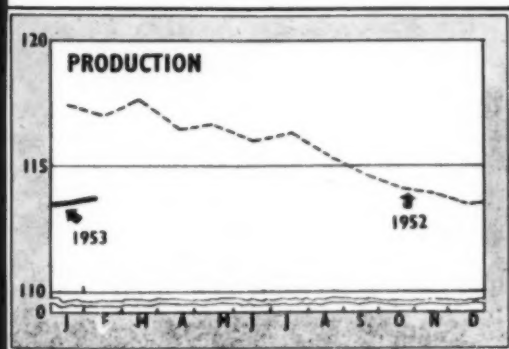
**New motor vehicles'** average monthly registration in 1952 was 37,987, against 34,493 in 1951. New registrations of private cars rose from 11,413 to 15,702; practically all other categories dropped.

**Personal consumption** at current market prices rose from £9,932m. in 1951 to £10,460m. in 1952, but fell from £8,675m. to £8,581m. when revalued at average 1948 prices. Expenditure on alcoholic beverages, tobacco, household goods and clothing all dropped sharply in volume.

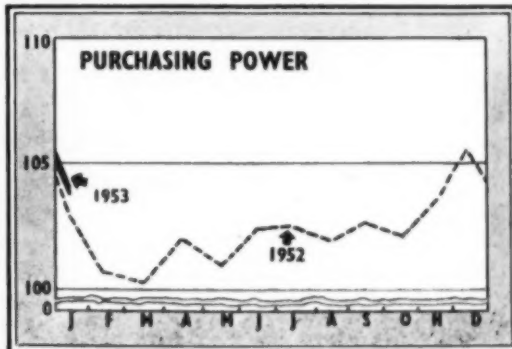
				Increase (+) or Decrease (-) on a		
				Latest Month	Month Ago	Year Ago
<b>BUSINESS INDICES</b>						
1. Production ...	1948=100	* 113.8		Same	—	3.6
2. Purchasing Power ...	(do.)	* 103.7		— 1.9	+	2.9
<b>MANPOWER</b>						
3. Total manufacturing industries	thousands	* 8,699		+ 16	—	295
4. Textiles ...	(do.)	* 96		+ 12	—	35
5. Engineering, shipbuilding and electrical	(do.)					
goods ...	(do.)	* 2,558		Same	—	40
6. Distributive trades ...	(do.)	* 2,627		— 18	+	11
7. Coal (on colliery books) ...	(do.)	721		— 1	+	13
8. Registered unemployed (G.B.)	(do.)	428.8		— 23.7	+	35.3
<b>PRODUCTION</b>						
9. Index of production: total, all industries	1946=100	* 116		+ 5	—	2
10. Coal (average weekly output) (thousand tons)		4,557		— 73	—	3
11. Gas available at gasworks (average weekly output) (million therms)		63.1		— 0.8	—	0.5
12. Electricity generated ... (million kWh) ...		5,802		— 807	+	16
13. Steel ingots and castings (average weekly output) (thousand tons)		† 351.4		— 1.0	+	31.2
14. Cotton yarn ... (million lb.)		* 14.1		+ 0.8	—	4.0
15. Rayon yarn and staple fibre (do.)		34.38		+ 5.16	+	0.24
16. Worsteds yarn (do.)		* 19.26		+ 1.53	+	4.38
17. Sulphuric acid ... (thousand tons)		149.5		— 7.2	+	7.8
18. Passenger cars (av. wkly. output) (do.)		10.06		— 0.15	+	1.30
19. Commercial vehicles (av. wkly. output) (do.)		5.03		— 0.12	+	0.03
20. Permanent houses completed ... (do.)		21.00		+ 0.13	+	4.23
<b>TRADE</b>						
21. Value of imports ... (£m)		† 285.7		+ 42.7	—	47.4
22. Value of imports, Western Hemisphere (£m)		* 45.0		+ 1.1	—	29.3
23. Value of exports ... (£m)		† 212.9		— 18.0	—	27.7
24. Value of exports, Western Hemisphere (£m)		* 30.0		+ 1.7	+	4.1
25. Freight train traffic ... (thousand tons)		†† 5.76		+ 0.16	+	0.02
26. Retail sale index ... 1947=100		* 112		— 48	+	8
<b>FINANCE</b>						
27. Currency in circulation ... (£m)		1,413		+ 13	+	86
28. Deposits, London clearing banks (do.)		6,029		— 230	+	136
29. Provincial cheque clearings ... (£,000)		7,370		— 450	—	190
30. National savings, total outstanding (£m)		6,019		+ 8	+	8
31. Gold and dollar reserves (do.)		751		+ 45	+	118
<b>WAGES AND PRICES</b>						
32. Weekly wage rates ... 1947=100		135		+ 1	+	7
33. Retail prices ... (do.)		139		+ 1	+	6
34. Price indices of materials used in industry 1949=100:						
Non-food manufacturing industry (do.)		150.5		— 1.4	—	26.5
Mechanical engineering ... (do.)		148.1		— 0.5	+	4.5
Electrical machinery ... (do.)		161.3		— 0.9	+	1.1
Building and civil engineering (do.)		131.0		— 0.2	—	3.8
35. Import prices ... 1952=100		91		2	—	15
36. Export prices ... (do.)		98		Same	—	3
37. Terms of trade ... (do.)		93		2	—	12

\*January. †March. ††Four weeks to February 22nd, 1953.  
All other figures refer to February.

## "BUSINESS" INDICES (1948=100)



A twelve-month moving average of the Official Index of Industrial Production (Total: All Industries).



An unweighted index of currency in circulation with the public, total bank deposits, and total outstanding national savings.

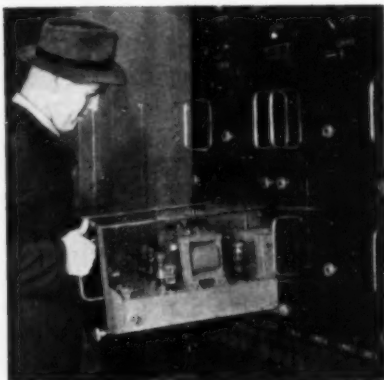


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An electric skip hoist charger for a new blast furnace in South Wales, where the entire hoisting and charging process is automatic—initiated by the pressing of a single button.



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"Higher Industrial Production with Electricity", some illustrations from which are shown, is available at 8/6 (9/- post free) from E.D.A., 2 Savoy Hill, London, W.C.2 or from your Electricity Board.

## Electricity for PRODUCTIVITY

# HOME MARKET

## Regional Surveys

### London and S.E. England

UNEMPLOYMENT in February dropped by 8,000—the biggest regional drop for the month. Recovery was well spread, with **engineering** taking leading place. Ford reported highest output in the history of the company at Dagenham—20,082 cars, commercial vehicles and tractors. Even so, present production schedules are insufficient to meet demand.

The Ford-Briggs tie-up should help to ease the situation—to the profit of both companies.

Vauxhall, too, are working to capacity at Luton. A range of new Bedford commercial vehicles is now in full production.

Big **building** projects are announced for the City of London. Licences for £10m. cover 30 buildings, the bulk in the City boundaries. Projects include offices for the Baltic Exchange, headquarters for the Federation of British Industries, the Trades Unions' Congress, and the diamond trade. Others: two banks, two insurance offices, and headquarters for a coal exporting firm, and university extensions.

South-Eastern and North Thames Gas Boards have both decided to peg **gas** prices at existing levels.

Sidelight on Londoners' **shopping** habits was given by London Transport to the Transport Tribunal. Evening traffic has dropped heavily in recent years. Main reasons: television, which keeps people at home; improvement in housing; larger number of women working during the day. Moral: the suburbs are increasing in importance as retail outlets. Shop turnover figures confirm this.

### Eastern

INSURANCE claims against flood damage amounting to £2m. have been paid to firms in the region on policies covering industrial and trade risks and industrial premises. Total loss covered by insurance is much higher—one estimate suggests £20m.

First **gas turbine**-driven pumping unit for Kuwait has been shipped by Ruston and Hornsby.

Ltd., of Lincoln. Installation is an experiment to determine suitability of gas turbine for pipeline work. If it succeeds, a vast new market is opened.

### Northern

INCREASED steel supplies have led to greater activity in **engineering**. Employment is rising, and the improvement is expected to continue. Though few enquiries for factory space have been received from outside firms, existing firms are expanding. Nineteen industrial development certificates were issued in January and February.

Main shortage is still heavy **steel plates**. Short Bros., of Sunderland, recently had to lay off 20 per cent. of their employees because of insufficient steel supplies. Remedy suggested by Sir Mark Hodgson, chairman, Northern Regional Board for Industry: buy more from abroad. Prices have been higher than British plates, but are now falling.

Government action to deal with future economic decline of West Durham when coking coal reserves are exhausted is demanded in a report issued by the Northern Industrial Group. Main concrete suggestion: liberal incentives to attract new industries to the area.

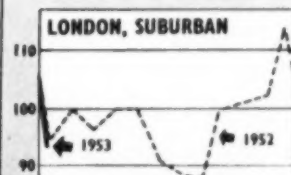
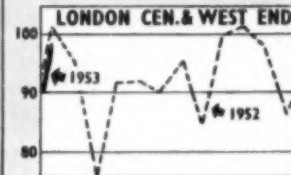
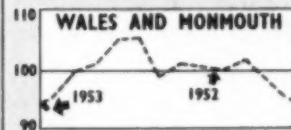
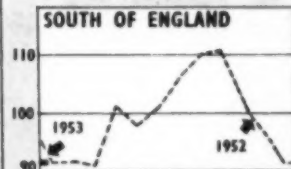
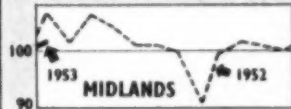
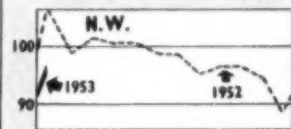
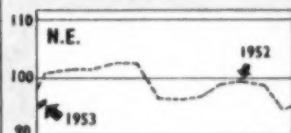
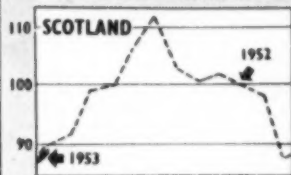
Newcastle-on-Tyne is to become an **air traffic** centre. Hunting Air Transport are to start internal routes from Newcastle to London, Manchester and Glasgow, and Continental routes to Oslo and Stockholm, Hamburg and Copenhagen, Amsterdam and Dusseldorf, Luxembourg and Basle, and Paris. Conditional approval for a seven-year licence has been given; nego-

Continued on page ix

### What the Chart Shows

Regional indices in the chart show the retail turnover in the region in non-food merchandise as a percentage of the national average for the month. The charts are based on the Board of Trade retail sales indices.

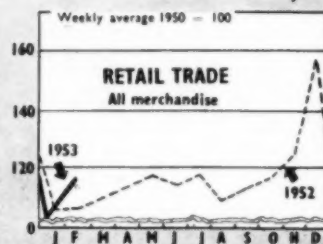
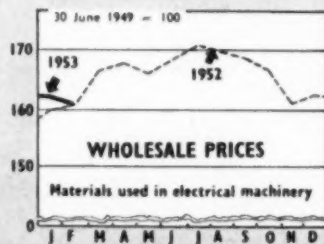
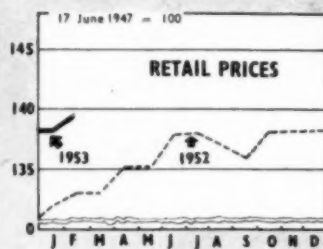
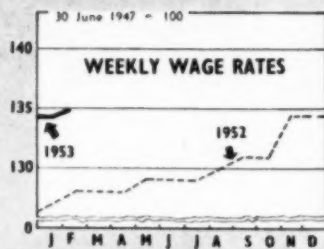
### REGIONAL RETAIL TRADE INDICES



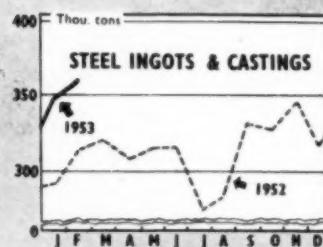
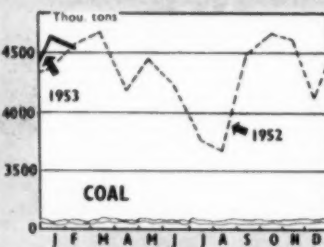
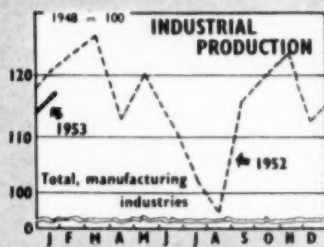
# STATE OF THE NATION

From this comprehensive series of charts, covering the main economic factors affecting the state of the nation, the businessman may gain a perspective of the situation governing his operations.

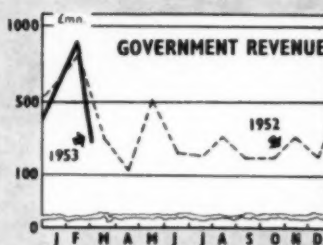
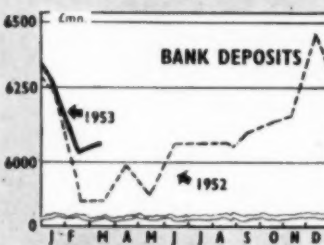
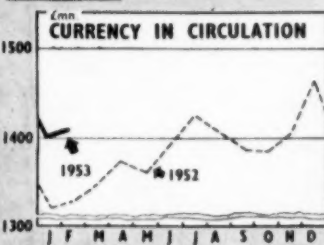
## WAGES AND PRICES



## PRODUCTION



## FINANCE



### HIRE PURCHASE PROTECTION PLAN UNEMPLOYMENT SICKNESS ACCIDENT

Motor-cycles	-	-	-	£2 19 6
Motor Assisted Pedal Cycles	-	-	-	per Hiring Agreement
Pedal cycles	-	-	-	£1 10 0
Motor cars	-	-	-	per Agreement
General Merchandise	-	-	-	10% on the outstanding balance
	-	-	-	2% on the outstanding balance

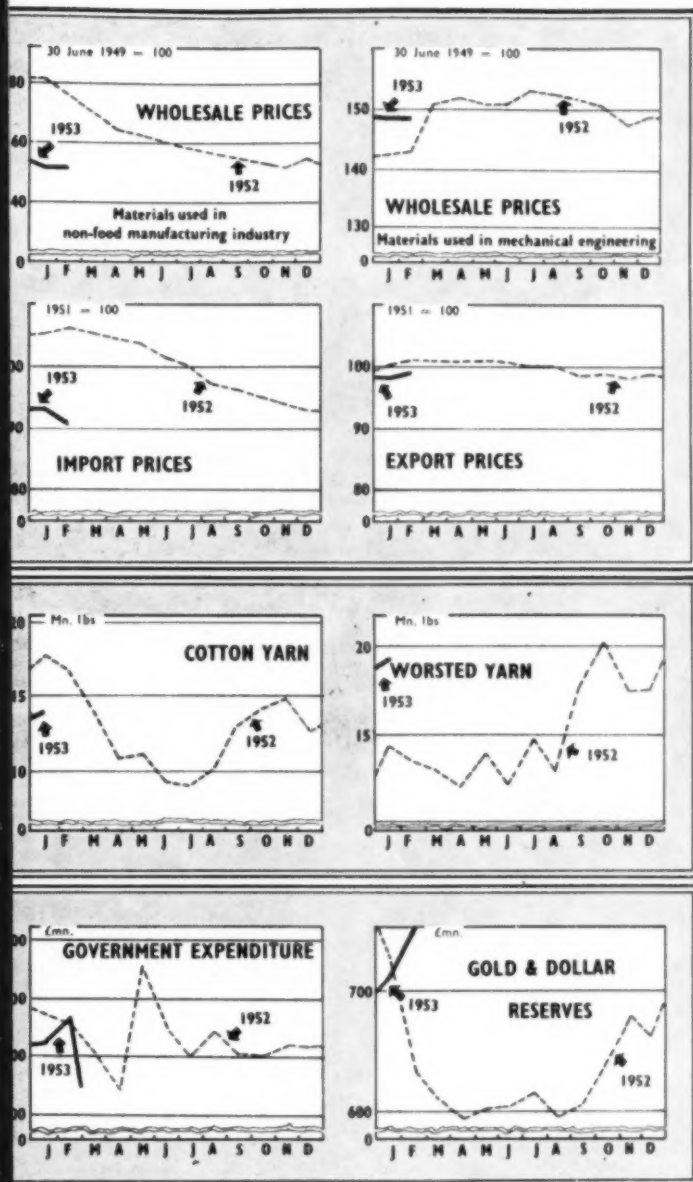
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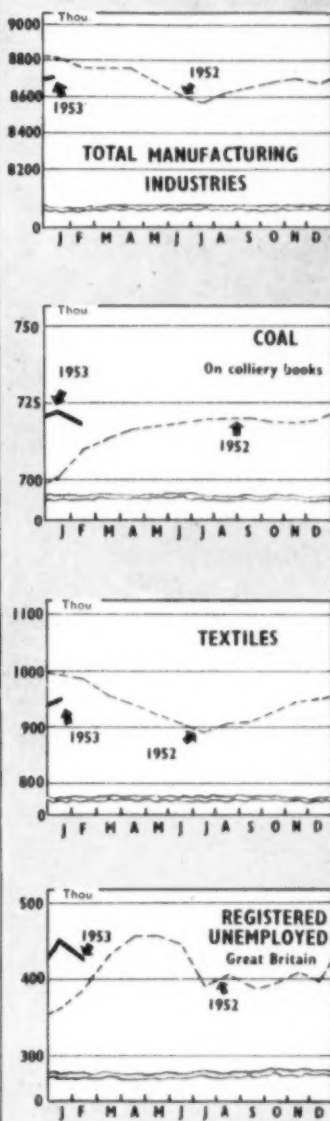
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FROM BOOKSTALLS



## *The shape doesn't matter*



Chairmen in bowlers and door-keepers in top hats, staff and works employees in trilbies or cloth caps, all become entitled to a State pension from age 65—of 32/6 per week.

The average man at that age may reasonably expect to live another 12 years—but on what?

Every person in your employment and you yourself, will one day need retirement

provision over and above this subsistence level, and such provision needs to be made in advance . . . now.

Modern pension planning has nothing to do with the shape of hats, but it is of vital concern to every man wearing one.

For expert advice on Schemes ranging from the Chairman to the door-keeper, for one man or a thousand men, consult

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1 NEWTON PLACE, GLASGOW, C.3 · 25 CROSS STREET, MANCHESTER, 2 · 9 TITHEBARN STREET, LIVERPOOL, 2  
12 EASY ROW, BIRMINGHAM, 1 · 7 SOUTH PARADE, LEEDS, 1 · 39 KILDARE STREET, DUBLIN



## INCOME GROUPS IN THE COUNTIES 1949-50

(Scotland and Northern Ireland)

Regional variations in income are vital purchasing power data for the sales manager. Authoritative sources, however, have been scarce. Now the Income Tax Commissioners have for the first time released details of incomes, before tax, classified by county in which the main place of assessment is situated, by range of income, and by type of income. Last month, PROSPECT gave a specially compiled table showing income variations between counties in England and Wales. The following table gives comparative figures for Scotland and Northern Ireland.

Income groups: A, £1,000 and over; B, £700 to £999; C, £400 to £699; D, £250 to £399; E, under £250.

	Average income	A	B	C	D	E		Average income	A	B	C	D	E
	£	£1,000 and over	£700 to £999	£400 to £699	£250 to £399	under £250		£	£1,000 and over	£700 to £999	£400 to £699	£250 to £399	under £250
<b>SCOTLAND</b>													
Aberdeenshire	384	3.70	2.62	1.41	42.5	37.0	Orkney	334	2.45	2.67	15.5	38.8	40.6
Angus	378	3.16	2.31	15.7	39.8	39.0	Peebles	410	5.24	2.62	12.4	38.9	40.8
Argyllshire	375	3.02	2.53	15.4	41.0	38.0	Perthshire	392	4.38	3.23	12.8	38.5	41.1
Ayrshire	373	3.10	2.52	19.7	41.1	33.6	Renfrewshire	368	2.18	1.89	23.0	41.0	31.9
Banffshire	367	4.35	2.79	15.4	36.3	41.1	Ross and Cromarty	329	3.03	1.87	11.5	34.6	49.1
Berwick	434	5.15	3.24	8.93	41.2	41.5	Roxburgh	343	2.81	2.37	10.3	46.0	41.6
Bute	365	4.63	3.44	14.4	32.5	45.0	Selkirk	367	3.01	2.71	11.6	44.3	38.4
Caithness	331	2.48	2.60	11.8	41.8	41.4	Shetland	294	0.89	2.57	10.9	36.7	48.9
Clackmannanshire	358	1.96	2.49	20.5	40.7	34.4	Stirlingshire	368	2.94	4.80	21.7	43.3	31.2
Dumfriesshire	365	4.06	2.10	14.7	36.7	42.4	Sutherland	388	5.41	1.94	12.0	35.7	45.0
Dumbartonshire	362	1.83	2.22	21.6	44.7	30.2	West Lothian	374	1.93	1.99	27.0	41.1	28.1
East Lothian	430	5.98	2.77	11.7	47.1	37.7	Wigtown	367	3.78	3.79	11.8	35.4	45.2
Fife	363	2.21	1.82	20.2	44.4	31.3	<b>SCOTLAND—cont.</b>						
Invernesshire	348	2.21	2.15	15.4	41.1	39.1							
Kincardineshire	399	5.52	3.33	11.8	34.8	44.5	<b>NORTHERN IRELAND</b>						
Kinrosshire	367	5.41	5.75	4.0	38.0	46.7	Antrim	356	2.71	2.25	16.7	39.1	39.3
Kirkcudbrightshire	402	5.40	4.41	13.3	32.5	44.4	Armagh	307	2.39	2.36	9.4	27.1	58.8
Lanarkshire	387	3.08	2.46	20.7	41.0	32.6	Down	351	3.98	3.13	13.2	30.6	49.1
Midlothian	403	4.09	2.95	19.1	42.1	32.2	Fermanagh	328	3.23	3.23	9.9	26.4	58.1
Morayshire	384	3.99	2.84	10.4	43.2	39.5	Londonderry	319	2.97	2.11	9.4	29.3	56.1
Nairnshire	413	6.94	1.53	10.7	35.2	45.6	Tyrone	317	3.37	2.16	10.4	28.4	55.6

## HOME MARKET REGIONAL SURVEYS (cont. from page v)

tations on detail are still under way.

**Building** activity proceeds apace. Consumption of cement in the northern counties rose from 494,000 tons in 1949 to 600,000 tons last year, and is expected to reach 630,000 tons in 1953. Brick production in 1952 amounted to 410 million—a record—and is expected to touch 426 millions this year. But bricks are still being imported from other regions.

## Scotland

**N**EW sources of information on Scottish business conditions are now available. The *White Paper on Industry and Employment, Scotland, 1952*, reviews last year's progress. The first issue of a new *Monthly Digest of Scottish Statistics* bring the picture up to date.

Key to future from the *White Paper*: rapid growth of Scottish **capital goods industries**. Nearly 7,000,000 sq. ft. of new factory space were under construction in early part of the year. By December, work had started on a further million, and over 2,000,000 sq. ft. completed. Total since end of war: 16,500,000 sq. ft.

High spot of development is Grangemouth's **oil refining** and **chemical** industry. Its port now handles more tonnage than any other in Scotland, bar Glasgow. Other capital goods industries started or expanded are steel, ships, aero-engine and other engineering projects.

The Digest of Statistics includes an index of production for Scotland, and a considerable number of figures not previously available.

The North of Scotland Hydro-Electric Board is to raise another £20m. from the public. Its scheme for transmission of current from the Lawers and Breadalbane projects to the grid has been approved. Cost: £865,000.

Blown **timber** in the March gales is now valued at 35-40m. cu. ft., or 5m. cu. ft. more than original estimates. Disposal arrangements are under way. British Railways will pay £1,750,000 for sleepers, crossings and wagon bottoms. The National Coal Board will buy timber for pit props, at prices still to be decided. The G.P.O. will also buy. Timber will be transported in the log for working elsewhere in Scotland; the government will pay two-thirds of transport costs.

Record post-war employment in the **jute** industry was re-

ported by Hubert G. Scott, at the annual meeting of the spinners' association. Recovery in jute outstripped that of other industries. Order books were filled up to the holidays. C. J. D. Renny, chairman of the Trade Federal Council, was equally optimistic over prospects for the next six to nine months. But he expressed disquiet over long-term prospects for jute, unless prices could be brought down to compete with other textiles or substitutes.

New industry is production of inorganic **fibres** from natural rock at a factory in Stirling. Cape Asbestos Co., of London, are behind the venture; sole distributors will be William Kenyon and Sons, Ltd., of Dukinfield (Cheshire).

## North-Western

**R**ATE of recovery in **cotton** is staggering the pundits. Yarn output is consistently hitting highest figures since February, 1952, and February cloth production was highest since previous March. Selling, too, is better. Exports are rising—mainly to smaller markets. If these can be retained when larger markets return, post-war records may again be reached.

### HOME MARKET REGIONAL SURVEYS (concluded)

Even the home trade is mildly booming. Cloth stocks are dropping, and the bulk of output is going direct to consumers. Yarn stocks are dropping more slowly. Rayon is sharing the recovery.

Limiting factor once again is labour. Of the 20,000 weavers lost in the slump, only 5,500 have so far returned.

**Coal** output is rising steadily; current figures are running 60,000 tons ahead of the comparative 1952 total. More may come. Small action committees to increase efficiency are being set up in 60 Lancashire collieries.

**Iron and steel** supplies are easier, and engineering companies are benefitting. Indeed, short-time working is reported at a number of foundries. Demand for finished iron and steel, however, remains steady. Chemical concerns are reacting to recovery; progress is steady, and has been helped by recent price reductions.

Mersey Docks and Harbours Board are to spend £500,000 on modernizing dry docks.

Improved turn-round at British ports, says Liverpool Steam Ship Owners' Association, was due primarily to fewer cargoes handled. And the gain was offset by losses in efficiency at overseas ports. British ships, too, made fewer journeys per year, though more were employed. Continental ports still have the edge.

New air services approved: Blackpool-Isle of Man and Birmingham-Isle of Man.

#### Midlands

**THE MOTOR** industry has turned the corner. Both production and sales are rising. Exports, in particular, show a remarkable recovery. North America and Australia are buying more British cars. Last year's export figures of 70 per cent. of output should be reached again in the next six months. British Motor Corporation, Jaguars, Rootes and Vauxhall are all busy. Main factors in recovery: new models designed for specific markets, and more aggressive selling.

Long-term prospects, however, still remain doubtful. Prices are getting out of hand. Foreign competition, particularly from Germany and Italy, is being increasingly felt. Unit costs can be cut only if total production is increased. This can only be achieved by realizing the home

market potential. Reductions in purchase tax should help.

Recovery has spread to most other **engineering** industries, though machine tools are still in the doldrums. Even here, however, there are signs of a revival. Australian doors have begun to re-open, and others are expected to follow. Short-time working has ceased in the motor cycle industry, but is rising again in the cycle section.

Conditions in the **carpet** industry are steadily improving, and some manufacturers are quoting twelve months' delivery. Home demand is brisk, thanks to housing progress, and export demand is increasing. Unemployment is virtually non-existent.

The **hosiery** trade is equally prosperous. Factories are working overtime; stocks have been liquidated; labour is again in short supply. The **footwear** industry is also busy, but there are signs that home buying is slackening off. Testing time will be May buying for autumn delivery.

Two new 6ft. seams of **coal** and reported near Stafford—an extension of the Cannock field.

#### Yorkshire

**ORDER** books in the **wool** industry are fuller than for many years. Some spinners cannot quote delivery before November. Orders are passing along the line satisfactorily, and both spinners and weavers are reasonably happy. Moderate decline in wool prices is expected—and hoped for.

Labour increased by 2,066 during February, while rate of machinery activity in the combing section was the best since 1950. Rate of wool consumption showed an appreciable increase.

New venture for Yorkshire: production of fancy narrow **fabrics** and woven labellings on Jacquard looms. H. H. Calmon and Co., Ltd., of Bradford, are responsible.

Mechanized pit haulage at Edlington Colliery, Doncaster, costing £1m., will release 200 haulage hands for coal-getting.

**Steel** production in Sheffield is improving week by week; so, too, is **tool** production. Heavy **engineering** shops are well booked, but new business is not so easy to obtain. Light engineering is benefiting from improvements in the motor industry. The **cutlery** industry is still suffering. Generally, all engineering firms report a

shortage of skilled workers.

New capital expenditure of Dorman, Long and Co., Ltd., in 1952, amounting to £4½m. Of this, £2½m. went on the new steel works at Lackenby, near Middlesbrough, which should be in production this summer, with an output of 500,000 tons a year.

Orders on hand at the Power-Gas Corporation, Ltd., Stockton, for blast furnaces and ancillary equipment amount to £10m.

#### Wales

**R**EDUCTION of stocks enabled the Steel Company of Wales to re-open ten hand-mill works for a time. But, reported the company, demand showed no revival, and the outlook remained serious. Loss of skilled labour is feared. A few days later, however, the Metal Box Co., Ltd., announced that it had placed an order for £1m. of **tinplate** with two firms, in addition to normal monthly commitments. Fall in orders, said Sir Robert Barlow, chairman, was only temporary. His own company had spent £7½m. on increasing productive capacity since the war, and one new canning factory alone, at Wisbech, would be using an additional 40,000 tons of tinplate a year by 1954.

Other sectors showed some improvement; Mond Nickel's overseas shipments in February, for instance, were the highest for over twelve months. Exception is aluminium; both I.C.I. and Northern Aluminium have laid off workers.

Increased development plans of the Ebbw Vale steel works have been finally approved. They include a new five-stand mill, other mills and ancillary equipment. Work on the £3m. scheme for new coke ovens and open-hearth and blast furnaces is well in hand. It will be completed by the end of 1954, and the whole scheme in 2½ to 3 years.

Plans are proposed for expanding **ship-repairing** work at Pembroke Dock, involving extensions to dry docks.

Work has begun on improvement of aerodrome at Rhosce, near Barry, now recognized as the new airport for Cardiff and South Wales. Transfer from Pengam Moors (Cardiff) is expected later this year.

Wage claim of engineering workers in West Wales is to go to arbitration.

## EXPORT MARKET SURVEY

**EXPECT** better sales in the U.S.A. and Canada this year. So says the report of the North American Buying Office of the American Chamber of Commerce. Demand for some British products—notably damasks and carpets—dropped in 1952, but is recovering.

Current developments confirm this. January and February retail sales in the U.S.A. were at record levels. Business activity in general reached a new peak in the first quarter. Personal incomes were higher than in the previous quarter, and American businessmen are discounting talk of a peace slump. Rearmament, they are arguing, will go on, even if fighting in Korea stops. And transition, when it comes, will be slow enough for painless absorption.

Support for tariff reduction increases. Latest advocate is the Congress of Industrial Organizations. But the Administration is still playing safe. Present levels will be maintained for at least twelve months, pending a full study of the question.

**DISCOUNT** recent trend towards increased capital development in Canada. Projects approved by Treasury—I.C.I.'s Terylene plant, the B.I.C.C. cables and wire plant, the Hambro investment and the Newfoundland venture—merely make good a time lag. Dollar shortage will prevent any large-scale extension.

**LOOK** for a rapid revival in Australia. Sterling balances have been rising sharply in recent months; by the end of June (end of the financial year) they may well have reached wool boom year levels. Main factor: increased exports of food products and wool. These should continue. Wool clip and wheat crop are expected to be records. By the end of the year, Australia should again be one of Britain's largest overseas markets.

**New Zealand**, too, is sharing this revival. Trading surplus of £15m. in February was the largest since January, 1951.

**NEW** export drive is coming from Japan, badly hit by Commonwealth import restrictions. Foreign reserves dropped to \$1,031m. in March—\$70m. below the January figure. The trade bank has already cut interest rates, and the government is to ex-

tend the foreign exchange retention scheme again to sterling and open-account areas. Since last July, the scheme has been restricted to dollar currencies.

Recent currency negotiations in London disappointed the Japanese. British proposals are said to have foreseen expansion of Japanese exports to sterling area from £148m. to about £168m.

Interesting sidelight on Japan's export difficulties: the U.S.A. recently warned Japanese authorities that prices for many procurement-demand (war) orders are too high and must be reduced if volume is to be maintained. But Japanese have frequently complained that some firms were tendering at below cost prices to get dollars.

**FRENCH** import cuts may not be as bad as they seem. No account was taken of (1) greater revenue from British tourists with increased allowances, or (2) increased exports from France to Britain. Both these should provide sufficient sterling to warrant the "selective" review promised. National Coal Board is not too worried; it can sell anything that the French do not want. But coal exporters are likely to be hard hit. Imports next quarter are expected to be 150,000 tons, against 230,000 tons for the quarter just ended.

**RENEWED** export drive, too, can be expected from Germany. Exports so far this year are below comparable 1952

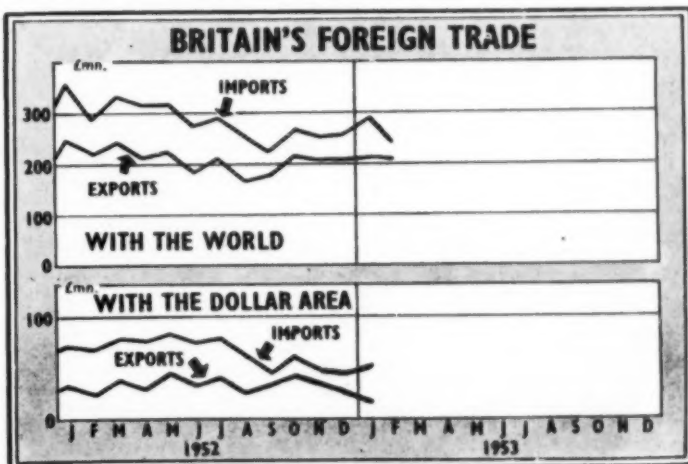
figures. Decline had become noticeable last year. Exports of chemicals in 1952 were down 16 per cent., those of textiles 22 per cent., and those of iron and steel 16 per cent. Overall rise in exports was due to increase in machinery, vehicles and electrical equipment. It is these that are now declining.

One reason is price. Recent increases in wages and iron and steel prices have increased costs to a point at which other countries—notably Britain—can quote competitively. Another is limited credit facilities.

Main spearheads of the new drive: the U.S.A. and the Middle East—notably Egypt.

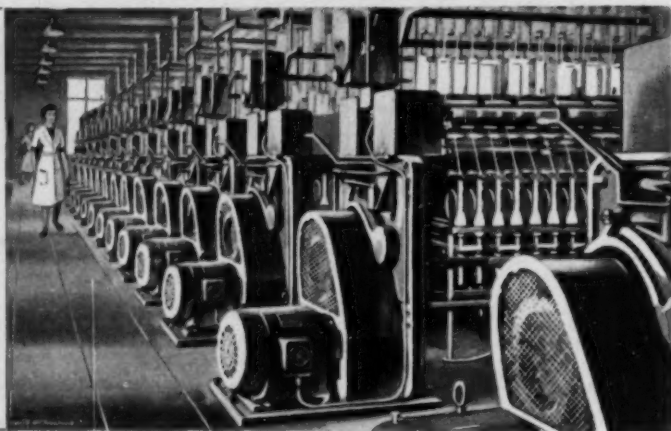
**SIGN** of things to come? Switzerland has set up a semi-governmental organization to stop dumping of textiles by Soviet Russia and Communist satellites. Local weavers complain that Russia, Eastern Germany, Czechoslovakia, Poland, Hungary, Roumania and Bulgaria are offering textile products in Switzerland at prices that do not even cover the cost of the raw material to Swiss manufacturers. Austria and Israel are also named as offenders.

**ABOLITION** of most export controls in South Africa is prelude to intensified export drive to other African territories. Last year, Africa, south of the Sahara, took £66m. worth of exports from the Union, supplied £37m. imports.



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For British textiles to meet world competition, leadership in quality must be backed by competitive prices. By increasing production per man-hour through the use of modern machinery this can be and is being done. 'ENGLISH ELECTRIC's' contributions range from individual motor drives to complete mill electrification schemes, and are backed by more than 30 years' experience in the application of electric power to the textile industry.



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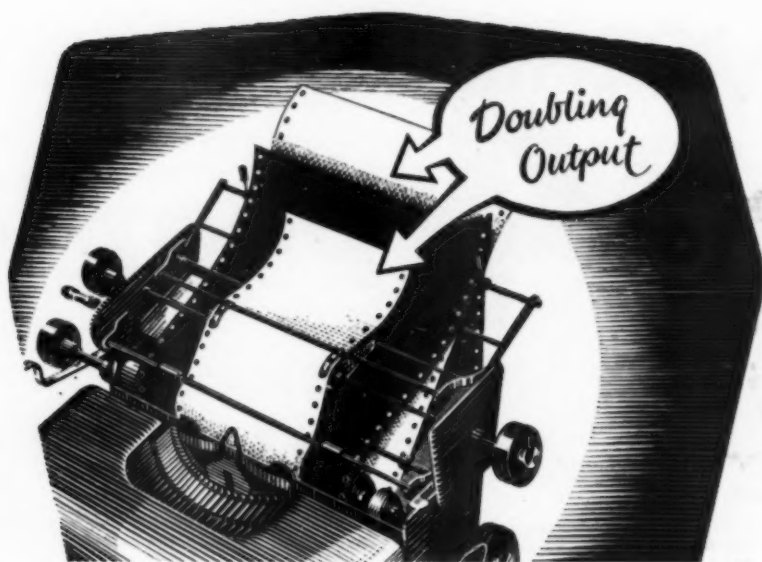
Through the application of electricity to industry as well as to the home 'ENGLISH ELECTRIC' contributes to the better living of millions.



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date summary. And, incidentally, alignment, accuracy and the quality of copies are guaranteed perfect by the unique Alacra *frictionless* feed.

The scope of this new method is enormous. No matter what the forms, if listing is involved, then the Alacra Dual Feed will save you time, typewriters and labour . . . all of which mean expense.

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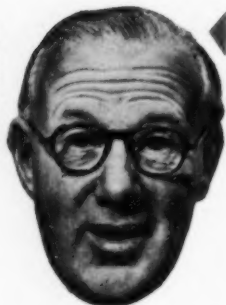


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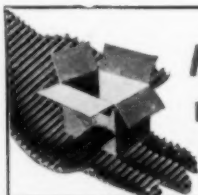
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*serves Industry, Commerce and*

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that gets through routine  
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for straight answers**

# The MARCH of BUSINESS

## DESERVED BETTER

**A**NNOUNCEMENT of its new programme of action by the British Productivity Council fell somewhat flat. The subsequent Tewson-Hill argument did not help matters. This *contretemps* was a pity, for the programme shows imagination and a realistic approach. It deserved a better start. Three lines of action are mooted:

**1 The Circuit Scheme.** Individual firms are invited to form their own six-man productivity teams. Each team will then visit the factory of another firm in the circuit once a month. In return, the firm will, once a month, admit a productivity team from another firm to its own factory. Circuits will consist of about 10 firms each, roughly of the same size and scope, but from different industries. Firms co-operating in the scheme will not be asked to admit competitors unless they want to do so.

**2 Local Productivity Committees.** These will be set up in 105 cities and towns. Form and content of their programmes will be left very largely to local initiative, but support in finance, lecturers, films, etc., will be provided from London.

**3 Television Films.** A series of fifty 4-minute films under the title, "There's Always a Better Way," for showing to the general public on television and on the non-commercial screen.

On a more ambitious scale, the month has seen the inauguration of a European Productivity Agency with a £3,500,000 operating fund, including £900,000 from the U.S.A. Its director will be empowered to co-ordinate various national productivity centres and plan conferences on a European scale.

★ ★ ★

**T**OLD by T. B. Robson, president of the Institute of Chartered Accountants in England and Wales; "Even tax inspectors get shocks. One was very friendly, outside office hours, with a businessman who sent generous presents to the inspector's home. The inspector protested, but the businessman averred they were only symbols of

his personal affection for the inspector. Finally the inspector made his last protest. He wrote to say that any further gift would have to be put on the fire. A ton of coal arrived next day."

★ ★ ★

## DEBATING EFFICIENCY

**I**N March, 1952, two Sheffield businessmen started a local branch of the Office Management Association. Twelve months later, one of them, T. W. Sherratt, general manager of John Walsh, Ltd., presided over a one-day conference attended by a hundred members and guests. With characteristic Yorkshire independence, the Sheffield branch broke with O.M.A. custom, and chose to debate machines and methods for improving office efficiency as a whole rather than discuss specific stages of office procedure.

To this end, they enlisted the aid of the continuous stationery and

formfeed equipment section of the Office Appliance and Business Equipment Trades Association, and devoted the day to discussing applications of continuous stationery. Guest speaker was J. F. Fewing-Tate, of the Anglo-Iranian Oil Co., Ltd., whose paper is summarised in this issue of BUSINESS (see page 63). Sir Harold West, managing director, Newton, Chambers and Co., Ltd., and Master Cutler, addressed a luncheon. An exhibition of equipment was also held.

★ ★ ★

**T**HE new economic freedom brings its linguistic difficulties. According to the Financial Times, "a very tight free market in wheat is in prospect in the United States."

★ ★ ★

## SUPER SALES TRAINING

**"SELLING,"** said PROSPECT last month, "gets harder every day." But the office equipment

### 'BUSINESS' READER SERVICE

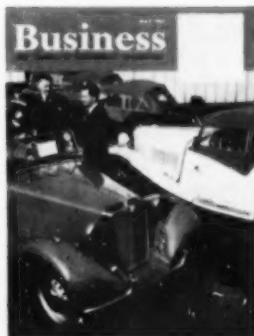
## Guide to Office Equipment

**I**N MID-JUNE, BUSINESS will publish a special 124-page Guide to Office Equipment. This is to be issued on the occasion of the 1953 Coronation Business Efficiency Exhibition, to be held in London from June 16-26. The Guide will contain:

- Four comprehensive lists—by manufacturers and suppliers, by product, by trade names, and by trade names grouped by product.
- Complete stand-by-stand review of the exhibits.
- Map of the exhibition hall.

The guide will be sent without charge and post free to all annual subscribers to BUSINESS. To others, it will be available on request at 2s. 6d. post free.

**O**UR cover photograph, specially taken for BUSINESS by F. Dunscombe Honiball, A.R.P.S., shows G. C. Tuck (right), general sales manager, Nuffield Exports, Ltd., and J. E. Atkins, works manager, with M.G. cars earmarked for export to the U.S.A. The sales success story of the M.G. in America is told in pictures on pages 56 and 57.



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industry at least, is facing up to the problem. Last January, BUSINESS described how Lamson Paragon Supply Co., Ltd., was training its salesmen. Other companies are taking action just as energetic.

With sales organizations in over 90 countries, the National Cash Register Co., Ltd., is as acutely conscious of the changed and changing pattern as any one. And this consciousness led to a conference of the company's senior sales executives from all over the world, held in London recently. Forty delegates from 24 countries remained in session for seven hours, five days a week, for two weeks, to inaugurate a system and curriculum of sales training the like of which, it is claimed, has never been devised before.

First commenced in the autumn of 1946, the preparation of the manuals upon which the new training plan is based has occupied a six-man team for nearly seven years in the work of research, deliberation, writing and compilation. In the three volumes of the manual is all the useful knowledge of cash register selling that has been acquired by experience during the nearly 30 years of the company's existence—clarified broken down, sorted out and arranged in the most logical, progressive sequence.

If the manual and all the "Instructors' Accessories" (including over 200 pre-printed easel charts) had been produced simply with the idea of co-ordinating and regulating the technique of sales training along the most efficient lines, the work and cost entailed would have been justified. But the team were also required to bear in mind the changes that were taking place throughout the world with regard to retailing methods—even, for example, in the primitive communities of the African territories and age-old bazaars of the East.

When the delegates return to their 24 home countries, they will gather their salesmen in from their territories and commence a series of post-graduate training courses based upon those parts of the official curriculum of study which can contribute towards the completion of their more advanced knowledge. For newly-recruited salesmen, instruction will commence at the beginning and continue over seven intensive weeks, to the conclusion. In the larger organizations, the techniques of instruction—via the manual—will be passed on by the delegates-executive to his sales training instructors by duplicating, on a small scale, the procedure of the London Conference: from then on, the

## PEOPLE \* PRODUCTS \* PLACES

**ENTER THE TAPIST**—New dictation system in Shell-Mex House makes this girl Britain's first "tapist". Executives dictate over the internal telephone system, speech being recorded and stored on magnetic tape machines; the "tapist" plays the dictation back and types the letters. This set-up saves time and increases typing output.



### PROGRESS IN PLASTICS—

This new version of the Minicar uses plastics in the construction of the bodywork. Both the bonnet lid and the rear wings are manufactured of fibreglass plastics.



**FINDING OUT**—The U.K. Engineering Study Team at the headquarters of the National Association of Cost Accountants in the U.S.A. The visit was sponsored by the Mutual Security Agency and the British Productivity Council. In the picture, left to right, are: H. C. Knott, Associated Industrial Consultants, Ltd.; M. Rodgers, Department of Scientific and Industrial Research; R. P. Marple, N.A.C.A.; W. F. Garnham (team leader) Ransomes Sims and Jefferies, Ltd.; A. S. Gunnarson, N.A.C.A.; T. Baylis, Sir W. G. Armstrong Whitworth Aircraft Co.; and E. W. Workman, The Morgan Crucible Co., Ltd.



**PORVIC PLANT**—This new plant has been opened by Pritchett and Gold and E.P.S. Co., Ltd., for the manufacture of Porvic. This micro-porous thermoplastic material is used in batteries where its uniform and regular porosity make it superior to other materials.

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4-12 New Oxford Street, London, W.C.1. Tel: Cha 3131. Factories: Brighton, Sussex

*Sales and Service Everywhere*

sales instructors will become responsible for the conduct of the training programmes as given to the sales forces.

★ ★ ★

**NEW** scheme for purchase tax has been approved by Customs and Excise. Under this, retailers need not pay purchase tax to manufacturers or wholesalers until they actually sell the goods. Advantage: increased incentive for retailers to stock and display goods. Disadvantage: more paperwork involved. But prior sanction must be obtained from local Customs officials, and agreement signed.

★ ★ ★

### SIDELIGHT ON PRACTICE

**S**IX years ago, the Office Management Association issued the results of an enquiry into office administrative practices. Now they have produced a sequel, the result of a comprehensive questionnaire returned by over 300 firms employing more than 108,000 clerical workers. (*Office Administrative Practices*, 40pp., 12s. 6d.).

The information presented ranges widely over every conceivable problem facing an office manager. It is broken down under subject headings, under geographical regions, and under status of worker.

Some highlights from the report:

A marked regional difference in recruiting methods. The Midlands and the South prefer press advertisements; the North depends more on Youth Employment Services; in the West and in Scotland, schools and "others" take first place.

In London and S.E. England, 42 per cent of workers, against 30 per cent for the whole country, are paid by credit to a bank account; London and S.E. England and Scotland both have 47 per cent of workers paid on a monthly basis, against a national average of 37 per cent.

One firm in the Midlands pays its clerical workers on a Tuesday.

Less than half the firms which answered pay for overtime; highest figure—believe it or not—is for Scotland.

The 5-day week is more popular in London, S.E. England and the Midlands than in the North and Scotland.

Smoking is permitted at any time by 63 per cent of firms, during breaks only by 20 per cent.

Only 20 firms measured output and paid by results.

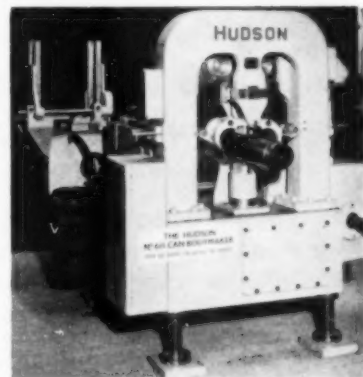
MAY, 1953

## PEOPLE ★ PRODUCTS ★ PLACES

**APPOINTMENT**—New chairman of Heenan and Froude, Ltd., is Charles L. Hill. Mr. Hill has been a director of the firm since it became a public company in 1936. He is also chairman of Folland Aircraft, Ltd., and holds a number of other directorships in the engineering world. The Heenan and Froude group consists of nine companies; products range from locos to abattoir equipment.



**PUZZLE PICTURE**—Ordinary jewellery, you imagine? Not quite. Although very decorative, this piece—one of three designs on the market—is really a hearing aid. They can be worn anywhere and on any fabric and each contains a  $\frac{1}{4}$ -inch diameter microphone.



**OIL PEN**—Designed for lubricating small parts, this Lubristyl oil pen has the advantage that its "sucking" action draws excess oil back into the instrument and does not allow it to collect around the point being lubricated. Three models are made, the finest one for the precision oiling of such things as watches, dental and optical instruments and miniature cameras.

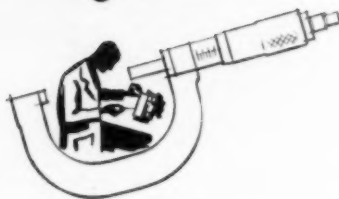


**QUICK CAN-MAKER**—This high-speed can body-maker (400 or more a minute) is the result of Anglo-American co-operation. Designed by American can machinery experts, it is being made in Lancashire—mainly for resale to overseas markets, including the U.S.A. Although a high-speed machine, it is easily reset for different sizes and shapes of can bodies, making batch production an economical proposition.

DESIGNED FOR SPEED



AND BUILT TO LAST



series  
**'E.N.'**

A new range of ADDING  
MACHINES and SMALL OFFICE  
BOOK-KEEPING MACHINES  
made in Britain by

*National*

The FEATURES that make the difference . . . Automatic Debit and Credit Balances; Automatic Grand Totals and Sub-Totals; Self-printing Noughts; Automatic Spacing; Automatic Punctuation and Colour Change (Red and Black); No Levers; Finger-tip Control.

The National Cash Register Company Ltd., 206-216 Marylebone Road, London, N.W.1  
and all principal centres.



Two examples of Brush Aboe overseas displays. Left: Window in the showrooms of the group's agents at The Hague. Right: A National diesel engine shown at Cyprus.



**EXPORT**  
Case History 1

## How Group Selling Built a £20,000,000 Export Trade

ONE of the most significant factors in the British engineering industry during the last few years has been the rapid growth of the Brush Aboe group. Although each of the group's major manufacturing companies had an established reputation before the beginning of the century, the group as it is to-day is of very recent origin.

The member companies produce between them a wide range of industrial electrical equipment and diesel engines. Their best markets have been—and will, I think, continue to be—overseas.

Because of this, the group's export organization is of first importance. I believe that this organization is well suited to its purpose and I am convinced that it is in group organizations such as this that the answers to the country's exports problems lie.

The most important of the group's manufacturing companies and their products are:—

**The Brush Electrical Engineering Company, Ltd.,** Loughborough (steam and gas turbines, turbo-

electric generating plant, alternators, D.C. generators, motors, transformers, switch-gear and diesel-electric locomotives).

**Mirrlees, Bickerton and Day, Ltd.,** Stockport (diesel engines up to 3,000 b.h.p. and diesel-electric generating sets).

**Petters, Ltd.,** Staines (vertical diesel and petrol engines of from 1½ b.h.p. to 40 b.h.p.).

**The National Gas and Oil Engine Company, Ltd.,** Ashton-under-Lyne (vertical diesel engines of from 62 b.h.p. to 2,000 b.h.p., horizontal diesel engines of from

3½ b.h.p. to 90 b.h.p., dual-fuel and spark ignition vertical gas engines of from 50 b.h.p. to 1,500 b.h.p., horizontal spark ignition gas engines of from 9 b.h.p. to 27 b.h.p.).

**J. and H. McLaren, Ltd.,** Leeds (vertical diesel engines of from 33 b.h.p. to 176 b.h.p., power units, belt sets, alternator sets, and medium speed horizontal engines of from 13 b.h.p. to 80 b.h.p.).

Between 1937 and 1950, the late Alan P. Good, who was the chief architect of the group, ac-

## Business

THE BUSINESS OF MANUFACTURING IN BRITAIN



By J. P. FORD

Export Manager, The Brush Aboe Group

**In the export market, unity is strength. Five companies, working together, can sell more, and sell more cheaply, than they could separately. So the Brush Aboe Group has found. And smaller organizations, less firmly integrated, might well achieve similar results with similar methods.**





**J. P. FORD**

**MR. J. P. FORD** has been with the Brush Aboe Group since 1949. He is director and general manager of Associated British Oil Engines (Export), Ltd., and of National Oil Engines (Export), Ltd., and is a director of Brush Export, Ltd., and of other associated companies.

**HE** was born in Montreal and is 40 years old. He was educated at Wrekin College, Shropshire, and Caius College, Cambridge, where he took his B.A.(Hons.) and M.A. degrees. He is also an Associate Member of the Institution of Production Engineers.

**PREVIOUS** engineering experience includes four years, from 1941 to 1944, with the Coventry Gauge & Tool Co., Ltd. From 1945 to 1948 he was with the British Engineers Small Tools and Equipment Co., Ltd., as general manager and chief executive responsible for the formation and operation of the BESTEC Export Organization for a group of manufacturers of machine tools and precision engineering equipment. He also did similar work for the export organisation of Scientific Exports (Great Britain), Ltd., which covered a group of leading manufacturers of scientific equipment.

**MR. FORD** has been vice-chairman of the Institute of Export since 1949 and a council member of the London Chamber of Commerce since 1951.

quired control of each of these companies. Before the war, the export business of each company was handled separately by the appointment of overseas agents for each. For example, Petters had their own overseas agents with individual Petter directors travelling abroad and supervising these agents, while Mirrlees had another group of agents—and so on.

With the formation of the group, the overseas organization was considerably strengthened. The result in a number of cases was that the individual companies' agents in each territory were visited and the strongest of these was chosen to represent not only the company whose interests he was already safeguarding, but the other group companies as well. The main consideration was to find in each territory the best agent for the group as a whole.

### Trading Companies

Before these new arrangements could be completed, however, it was necessary for the group to have an export trading company with which these agents could deal. For this purpose, Associated British Oil Engines (Export), Ltd., (known as ABOEX), was set up to control the export sales of Mirrlees, Petters and McLaren. Subsequently, a parallel organization, Brush Export, Ltd., was set up for the benefit of The Brush Electrical Engineering Co.

It was later found necessary, when National came into the group, to set up another company to control their exports because some of the products of National were competitive with those of Mirrlees and McLaren. At the end of 1951, therefore, National Oil Engines (Export), Ltd. (or NOEX for short) was formed.

The main object of setting up these companies was to handle the group's exports through one organization with a home and overseas staff who had expert knowledge of overseas markets. It also became much easier to control the network of overseas agents.

The appointment of agents follows the pattern of the three export companies. There is one set of agents for ABOEX, one set for NOEX, and another for Brush Export. In some cases, added

strength is given to the group's overseas organization by appointing the same agent for Brush Export as for either ABOEX or NOEX.

There are now about 130 agents for each of the export companies. Before this network could be set up, however, it was necessary to have a team of overseas directors covering the world on behalf of the group. In some cases, these directors are based in a particular territory and are responsible for supervising the agents in a number of surrounding territories. In other cases, they are based in the United Kingdom and make regular visits to each of the territories under their control.

At present, the group has seven senior overseas directors covering Central America, South America, British East and West Africa, the Middle East, Europe and European African possessions, the Far East, and India, Pakistan and Burma.

Each of these directors has one or more travelling assistant execu-

**HANDING-OVER** of the first of 25 diesel-electric locomotives built by Brush Bagnall Traction, Ltd., for the Ceylon Government. At the microphone is H.E. the High Commissioner for Ceylon: on his left, Sir Ronald Matthews, chairman, Brush Electrical Engineering Co., Ltd.



IN TWO HEMISPHERES : Distribution of key points in the overseas organization of the Brush Aboe group. Red flags indicate subsidiary companies, white dots show location of agents.



tives who help him to cover his territory, so that between them they give the most efficient supervision to each area. The overseas executives not only investigate and appoint agents, supervise their stock holdings and so on, but are also responsible for giving the agents technical help with the group's products and assistance during important negotiations with government officials and customers.

In some parts of the world, the group has its own trading organizations which operate as sales agents for its individual companies. There are now group trading companies in Canada, the U.S.A., South Africa, the Rhodesias, Australia, Belgium, Ireland and India.

### Strategic Stocks

These overseas companies are responsible for the maintenance of strategic stocks of engines, generating sets and spare parts to meet immediate demands in their own and adjoining areas.

The group's overseas staff report back to this country regarding new developments in each of their territories calling for special-purpose plant. As a result, the group works closely with manufacturers of, for example, agricultural equipment, to produce plant suitable for development schemes abroad.

The specific functions of the export trading companies in this

country, apart from those already mentioned, include provision of:—

A staff in London to deal with consulting engineers, export houses, Crown Agents and similar buying organizations and to maintain contact with government departments and the London representatives of overseas governments

Central accounting arrangements which enable the Group to obtain, through banks and insurance undertakings, better terms on foreign business.

Central market information for the benefit of all the factories

A central point for the reception of agents and overseas visitors from which they may begin tours of the group's factories

Overseas publicity of all kinds on a group basis, through the group publicity manager.

Some very important business is also done outside the agency organization. This is not because that organization is inadequate, but because we believe in more than one method of attack in the export markets.

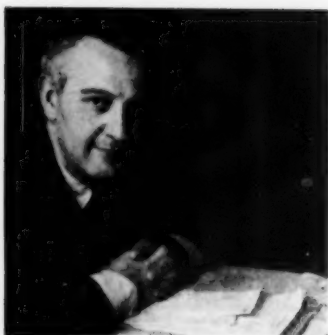
A good example of this type is the special negotiations with the Russian Government during 1948 which led to an order for 5,000

medium-sized diesel generating sets for village electrification in the U.S.S.R.

These sets had been developed for supplying electric current to villages in any part of the world which was not covered by a grid scheme. Their complete mobility means that, with each extension of the grid, the sets can be moved farther out to provide electricity for other areas.

I should like to quote another example of the group's success overseas—one of the most remarkable, I think, in its history. In one particular market, we found a company which had an excellent distributive organization but no real engineering strength. By working closely with this company after its appointment as group agents, we managed to achieve an average delivery to this market of 1,000 engines a month during the period of peak demand from 1949 to 1952.

Particular attention is paid by overseas directors to the service organizations of the group's agents. They keep a close check on every agent's stocks of spare parts to ensure that they are maintained at the correct level. As an insurance against any specially urgent demands, the service departments of our factories keep sufficient stocks



**PIONEER** : The late Alan P. Good, chief architect of the Brush Aboe Group.

to enable them to send any known spare part by air freight to any part of the world.

Overseas directors also supervise the quality of each agent's service engineers. In every major territory, agents are carrying on their staff engineers trained at group factories in this country.

I should like to stress the point that this extensive organization does not imply any degree of inflexibility. This is particularly important at the present time, when licensing and currency restrictions are apt to develop overnight.

When these difficulties occur, the overseas director for the area takes special steps immediately to ensure that his agents obtain the maximum possible licence and currency allocations. At the same time, members of his staff make an

intensified drive in other markets in their area, thus helping to minimise any drop in exports to the area as a whole.

Having described in some detail the group's export organization and the agency network under its control, I should like to stress the value of operating on a group basis. It has many advantages over the system where each individual company in a group controls its own export sales.

I am convinced that with the advent of the buyers' market in consumer goods and in the smaller types of capital equipment, the one hope of maintaining exports lies in taking advantage of a group organization with its overwhelming advantages of increased coverage and efficiency for a reduced cost.

For example, the Brush Aboe group was faced in the second half of last year with the most severe licensing or currency restrictions affecting its trade with Australia, New Zealand, India, Pakistan, Indonesia, Brazil, Chile, Turkey and Egypt. As all these have been, in the past, good markets for British engineering products, any individual company exporting on its own would have been faced with an extremely severe drop in its exports which might well have proved disastrous.

The only hope of counteracting such conditions is, firstly, in finding alternative methods of trading with such territories (such as by barter, or by triangular transac-

tions through third territories), and secondly, in applying additional pressure to the markets which are still left open. This was a step which the group took immediately world trading conditions became difficult in March last year and it meant, of course, sending additional representatives to those markets.

No one firm could possibly afford to spend money on overseas travel in the face of a dwindling order book to the same extent as a group which has sufficient resilience to offset this—and which can, at the same time, afford the extra travel because each visit made by an overseas representative is paid for only once, although he will be working on behalf of five or six factories. This is to say that a factory's sales effort is obtained for one-fifth of what it would cost if the factory were working independently.

### **Need for Groups**

Having been responsible for the development of group export organizations in two other industries, I am more and more convinced that the only way in which British industry can compete efficiently in the export markets of the world is by the formation of groups similar to the Brush Aboe group.

Ideally, each group would be composed of the leading British manufacturers of a particular range of products. As an example, I would like to see a group covering agricultural equipment composed of, perhaps, five to ten leading manufacturers whose products do not compete, but which are sufficiently complementary to enable them to offer to overseas markets a complete range suitable for meeting the many schemes now being developed by such organizations as the World Bank, the Food and Agriculture Organization of the United Nations, and so on.

These world organizations are working to assist territories in their first, second or third stages of development. The first stage is to open up roads, railways and other forms of communication through forest or desert. This calls for contractors' plant of all types. The next stage is to develop agriculture to feed the populations that follow the roads and railways. The third stage is the development

## **6 Gains from Group Selling**

- 1 Top executives can be spared to concentrate on visiting overseas agents and customers.**
- 2 Overseas agents can be maintained economically on a full-time basis at centres offering too small a market for one firm to bother about.**
- 3 Spares and maintenance services can be offered more widely.**
- 4 Central accounting and marketing information facilitates production planning.**
- 5 Overseas publicity can be more widely spread.**
- 6 Changes in overseas market conditions can be tackled more rapidly.**



DESTINATIONS (1) : Brush Aboe products in their working surroundings. Left : McLaren generating plant at the Nigerian Oil Mills, Kano. Right : The municipal power house at Mullumbimby, New South Wales.

of industry for which power plant of all types is required—probably diesel-electric in the first place, followed by thermal and hydro-electric plant.

As these industries develop, so there is the need for all the plant to fill the modern factory. I have already pointed out the need for groups providing agricultural equipment and contractors' plant. The Brush Aboe Group provides a complete range of power plant. With industrialization, there is an obvious need for machine tool groups, textile machinery groups, and so on. Some groups, I know, exist within these fields, but they are by no means comprehensive and therefore are not in such a strong position as Brush Aboe to offer the complete requirements of a particular overseas development scheme.

If such groups existed, a very

close liaison could be built up between them. For example, if the overseas director of the agricultural equipment group were visiting a territory which had an agricultural development scheme calling also for prime movers for pumps, his agricultural machinery group would immediately get into touch with the power plant group who would work jointly with him on this particular scheme.

My own group's experience at the moment is that when we hear of such schemes through our overseas directors, we have to tackle individual manufacturers of the other types of equipment required on a rather hit-and-miss basis because none of them covers the complete range required.

This results in inefficiency and wastage of valuable time during negotiations (my experience has always been that the effectiveness of negotiations is generally in inverse proportion to the number of interests involved).

If one or two large groups of

companies can between them cover a complete scheme, they have a very much better chance of obtaining the contract than if ten or fifteen individual and much smaller manufacturers try to obtain a small slice of the contract for themselves.

After all, as private individuals we prefer to negotiate with one builder if we want a house built and leave him to worry about the sub-contractors. If we had to deal with twenty or thirty sub-contractors involved and place separate orders with them, houses would be even more expensive than they are to-day and—what is more important—we should be more reluctant to buy than if we could deal with one man.

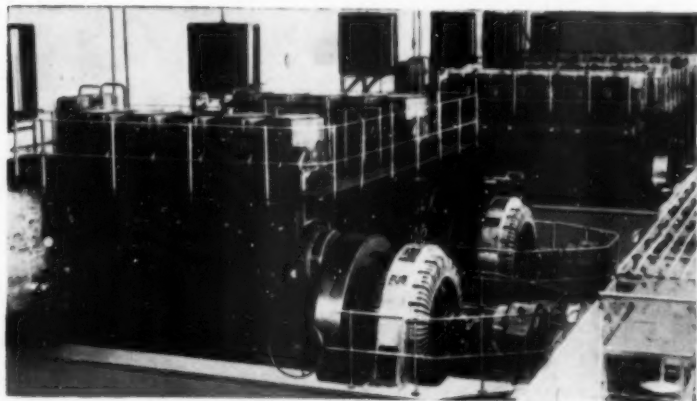
### Success Story

The value of a closely-knit group of companies interested in a particular overseas project has been underlined in the last few weeks by the news of an order for £10 million worth of plant for a Spanish iron and steel works. As the result of four leading British manufacturers setting up a special company to negotiate this business, they succeeded in out-bidding keen competition from France, Germany and Switzerland.

The strength of their organization lay in the prompt formation of a consortium of manufacturers with non-competing interests who between them covered the complete range of requirements for an iron and steel works.

This success could be repeated many times if similar organizations were set up either to develop their world business on a long-term plan, or on an *ad hoc* basis to negotiate one particularly large overseas order. Indeed, the success of Americans in many of the larger industrial projects lies in the fact that they work in this way.

DESTINATIONS (2) : National diesels, Egyptian Government power station, Abu Zaabal. Six engines total 4480 b.h.p.







# How They Started Their Own Export Department



By JULIAN ACOMB

**T**HE export of British beer has behind it a long tradition going back at least to the eighteenth century. By 1774, Benjamin Wilson, who had founded Allsopp's in 1708—his daughter married a James Allsopp—was complaining that orders on hand from St. Petersburg (now Leningrad) exceeded 600 hogsheads and that he could not accept any further business.

In 1934, Allsopp's was merged with Ind Coope. As Allsopp's had already built up such a reputation overseas, it was felt that it would be wiser to continue the use of Allsopp's name for marketing abroad. To-day Allsopp beers sell in 46 overseas markets.

The pattern of the export trade in beer, however, has changed much during the course of the years. To-day, for instance, nearly all the beer which Ind Coope and Allsopp sends abroad is lager, though strong ale and stout are still provided to certain markets (mainly the West Indies and British Guiana).

This change in the type of beer sent abroad took place at the turn of the century when, to meet popular demand overseas, Allsopp's set up a lager brewery at Burton. Although the Burton water, with

its high gypsum content, is ideal for pale ales, it did not prove so suitable for lager, so in the early '20's the brewing of Allsopp's lager started at Alloa, in Scotland. To-day it is estimated that over 20 per cent of the British lager sold overseas carries the Allsopp labels.

There have been changes, too, in the markets abroad. Before the war, a large proportion of the British beer consumed overseas was drunk by the white population. To-day it is to the indigenous populations that the exporters appeal.

In the initial stages of the expansion of their markets, Ind Coope and Allsopp found it easier to appoint export bottling agents to deal with different sections of their trade than to handle their sales direct. In 1952, however, two directors of Ind Coope & Allsopp, D. W. Pritchard and D. Maxwell,

**Export markets are always changing. The selling organization that worked efficiently yesterday may not be the best to meet today's needs. Even a firm with over 200 years of exporting behind them must keep up with the times. Here is the story of how one such firm improved their export set-up to meet market changes.**

went on a good-will tour of a number of Ind Coope and Allsopp's overseas markets. Their tour convinced them and their fellow-directors that the time had come to have their own export department.

The overseas agents and buyers that Mr. Pritchard and Mr. Maxwell met made it plain that they felt more confident when dealing direct with the brewing company. And the feeling of the board was that the prestige which Allsopp's beer had gained overseas could best be maintained and developed if beer sales were the immediate responsibility of the company.

Consequently, in September the company decided to set up its own export department.

The staff for the department came from one of Ind Coope and Allsopp's subsidiary companies, The Alloa Bottling Company Ltd.,



who had in addition been one of their export agents. The manager of the new export department, W. A. Smith, previously assistant managing director of The Alloa Bottling Company Ltd., has 35 years' experience in the export and ships' store trade, for sixteen of which he was responsible for production and sales with the Alloa company.

The breakaway from the use of agencies has not been complete. Although Ind Coope and Allsopp now handle all their own direct export trade, they still use agencies in this country to handle ships' stores business, where beer is sold direct to ships in British ports for use aboard. J. P. O'Brien and Co., Ltd. serve the west coast; C. G. Hibbert & Co., Ltd. serve London and the southern ports; and Ind Coope & Allsopp themselves serve Scottish ports.

The ships' stores trade is important, and it is linked in more than one way with the export trade. Passengers travelling abroad develop a liking for Allsopp's lager aboard ships and sustain its sales if it is obtainable in the country to which they are travelling. Conversely people who have drunk Allsopp's overseas are usually glad to find this familiar beer aboard ship.

The change has brought both technical and administrative advantages. With beer, all sorts of factors can affect the keeping qualities, head retention and, indeed, the taste of the ultimate product. The bottling stage is of prime importance.

Under the old system, the export

**IN ANY LANGUAGE :**  
Part of a stand at a Cyprus fair. Advertising text must be adapted to the country concerned, but the appeal of the poster's subject is universal.

**FOR THE BOAT :**  
Picture at foot of page shows packed cases of Allsopp's lager being automatically lidded and wire-bound—last operation before despatch to the export steamer.



agents bought the beer in bulk and bottled it themselves. However good their equipment, the fact that Allsopp's beer was bottled under different conditions meant inevitably that there was some variation in the beer distributed by different agents under the same label. In attempting to capture or hold large-scale markets, whether at home or abroad, sellers must be able to guarantee to the buyers that they are buying a consistent high-quality product. All the bottl-

ing of Allsopp's lager is now done at Alloa, where the lager is brewed, which ensures maximum control over most of these variable factors.

The change has also helped to streamline the export process. Where previously delays were sometimes inevitable when enquiries were channelled through the outside agencies, the centralization has brought about a speed-up on decisions of all kinds. Also, as an integral part of the Ind Coope & Allsopp organization, the export department can now call on specialist departments for immediate advice and assistance. The main specialist departments at the Burton headquarters, upon which the export department relies are:

**(a) Advertising.**

**(b) Chemists.** The laboratory is called upon to make routine as well as special checks on the quality, palate, condition and drinking characteristics of beer bottled for export. In addition, test samples are sent back from various markets so that the beer can again be analysed after a period under tropical conditions. The export department thus has at the back of it all the technical backing of a highly qualified brewery laboratory.

**(c) Export statistics** are kept by the sales research department at



Burton, which is responsible for collation of figures and presentation.

(d) **Buying department.** Such items as cases, bottles, crown corks which were previously bought by the individual export agents, are now bought centrally for the whole of Ind Coope's export, and there are not only economies from this, but as far as possible these items are bought in conjunction with the large demands for the home market. This ensures that these items of export equipment are bought at the most advantageous terms and prices.

One outstanding advantage in having one office instead of three is that it becomes easier to obtain an overall picture of all aspects of the trade.

The whole character of the export beer market is one of flux. A market may suddenly drop out—as, indeed, Australia did last year when imports of beer were stopped overnight. Other markets in different parts of the world are likely to increase, so it is a question very largely of balancing decline in one part of the world by the increase in another.

This means that it is difficult to forecast export requirements, but an annual forecast of trade for each market is made by the export department in relation to the re-

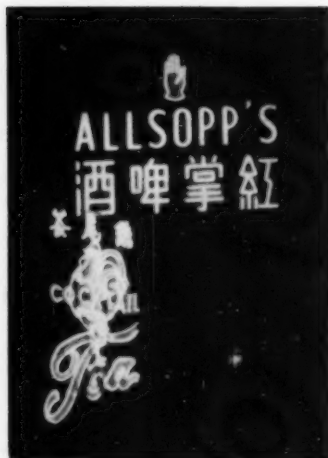
ports of business conditions from the agents, from a general study of economic conditions throughout the world, and as a result of an intimate knowledge of the various trade controls of bulk buying arrangements which must affect the export picture.

The export department also sends out a very lengthy questionnaire to each one of its overseas agents annually.

Advertising needs in one country, too, can be balanced dispassionately against those in another. The greater part of the advertising is done by the brewers, but in many markets this is reinforced by a certain amount of advertising paid for by the local agents. Major campaigns which employ posters or press, films or radio, are usually discussed in great detail with the agent and are planned by the group's advertising department in Burton, working closely in conjunction with their London advertising agents.

Production needs, too, can be gauged farther in advance and with greater accuracy.

The setting up of the export department in London was an obvious but progressive step. Most of the large shippers have their head offices here, and here, too, are agents of most of the overseas buyers.



**FAR EAST:** The familiar red hand tops this neon display in Hong Kong

No British beer was exported during the war. The struggle to re-establish pre-war markets has been a hard one, but Ind Coope and Allsopp have done it. And since they have started their export department their sales have progressed. Sales of beer overseas to-day are 40 per cent higher than before the war. This is not, however, entirely due to the change in their distribution methods. Mr. Smith attributes the expansion largely to the fact that a number of Empire markets, including West Africa, are cutting beer imports from non-sterling areas. Increased advertising in selected areas has also played its part.

### Staff Savings

Finally, the formation of Ind Coope's own export department has produced very considerable economies, partly on the production side and partly in terms of office staff. For instance, the office staff of the old Alloa Bottling Company is now, without any augmentation, able to handle all the export business of the group, where previously the work was shared between three companies. On the production side, by merging the bottling organization of one of the company's main export subsidiaries into the group of organization, it has been possible not only to improve the efficiency of the department, but also to reduce the number of the staff.

## YOUR OWN EXPORT DEPARTMENT HAS THESE 8 ADVANTAGES

- 1 **Quality is closely controlled at source**
- 2 **Decisions of all kinds are speeded up, delays in delivery minimized**
- 3 **Specialist advice on particular problems is obtained rapidly when needed**
- 4 **Centralized statistics aid business forecasting**
- 5 **Centralized buying of packaging materials, etc., cuts costs**
- 6 **Advertising appropriations are balanced more easily and more economically**
- 7 **Production schedules are planned farther ahead—and with greater accuracy**
- 8 **Economies in manpower are made in both plant and office.**

# MANAGEMENT *at* WORK

## SMOOTHER CHANGES

**I**N a buyers' market, the path of production never runs smooth. Constant changes in the product, to improve quality or meet changing market demands, play havoc with factory schedules. And many a wild-eyed works manager has



H. DREW... Engineering drawings can't be frozen

appealed to the board: "For Heaven's sake, freeze the design so that we can get down to production."

Deaf to such an appeal is Harold Drew, director and chief engineer, Vauxhall Motors, Ltd. "An engineering drawing," he says, "is not a dead thing that can be 'sealed' or 'frozen.' It should be alive, and the surest sign of life and health is a long list of entries in the change record column."

Constant change, argues Mr. Drew, is inevitable, desirable, and can be taken in the stride of any production department—if it is properly organised. In a paper read to the Automobile Division of the Institution of Mechanical Engineers, he recently gave some valuable practical advice on how to introduce changes.

Basic principle is that "the line must not stop." To ensure this, two things are needed: first, all

proposed changes must be designed, tested and proved remorselessly on a development basis before being introduced into production; secondly, all who will feel repercussions of the change must be consulted before it is approved. Vauxhall have a special Engineering Change Committee, composed of senior representatives of engineering, production engineering, factory, supply, inspection and costing departments, which meets once a week for the sole purpose of discussing engineering changes.

Timing of changes, too, is of fundamental importance. Don't mark impending changes "Immediate" or "As soon as possible"; the first is impossible; the second too vague. On the other hand, don't specify a particular date or job number; this is too inflexible. Five points that can be used are:—

*When stock of parts to present particulars is exhausted.*

*When available (usually accompanied by an instruction to scrap stocks).*

*When equipment is available.*

*With part number so and so (used to synchronize detail changes on components with the corresponding changes on a "master" part selected to dominate a complex change).*

*With production of model (used in connection with a model not yet in production).*

A major warning: based on bitter experience; don't "batch" changes. Chaos and waste are bound to result.

Cost all engineering changes in advance under six heads:—

1. Cost of new capital equipment required.
2. Cost of new non-capitalized tools and fixtures
3. Effect on material cost per unit
4. Effect on labour cost per unit
5. Cost of material rendered obsolete by the change which will be scrapped
6. Cost of reworking material.

To avoid any possible dispute, charge all costs against a special

engineering change account, budgeted annually by the engineering department, or a special project appropriation account.

Finally, give adequate warning of imminence of a change to all concerned.

## SHOWROOMMANSHIP

**W**HEN the Gas Council organized a gas sales service conference in March, they enterprisingly asked Denis A. C. Butlin, director of public relations to the National Cash Register Co., Ltd., to advise them on how to use showrooms to sell more gas appliances. Many of the points that Mr. Butlin made have a general application. Samples:

Don't use the point of payment to display illustrations of new and expensive appliances. It is better salesmanship to wait until the pain of payment has subsided before the gambits of temptation are commenced.

The attractiveness of all appliances designed to stand on the floor is always greatly enhanced if they are mounted on movable plinths of, say, only two inches



D. A. C. BUTLIN... Sometimes it's better sale: man hip to wait

in height. The plinth does for the object it supports what the frame does for a picture; it "sets it off."

When appliances must be displayed side by side or back to back, use a backboard with a very well finished surface of an attractive but appropriate colour. Use dividing pieces as well—just large enough to separate each appliance from its

neighbour, and so help to focus the attention of the customer on one model at a time. In window displays, be bright in every sense; bright lights, bright colours, bright ideas. In both window and showroom, use your floor as a main factor in any well-considered colour scheme.

## DEVELOPING PEOPLE

**T**HE Westinghouse Electric Corporation of America employs some 4,500 supervisors—foremen, section heads, superintendents, division managers and on up to the senior executive rank level. In the past, they have found difficulty in obtaining suitable recruits for this vast army. Now they have started a new four-point management development programme. This will, in the words of Gwilym A. Price, president of the corporation, find future managers earlier, keep track of them once they have been found, challenge them to realize their full capacities, and train them more thoroughly and prepare them better for promotion.

The programme has four steps:

1. Making an analysis of the organization—determining the responsibilities for each management position, and deciding the qualifications of the man who is to fill that position.
2. Appraising the holder of each management position—how well he is doing the job and his potentiality for a greater responsibility.
3. Taking an inventory of management personnel. Each company unit balances its requirements against its resources and assembles information on recommended replacements so that planned and orderly changes may be made as needs arise.
4. Guiding the development of the individual: rotation assignments within the company, on-the-job training and off-the-job work, including courses in colleges, universities and technical schools.

## O & M FOR SHELL

**L**ATEST newcomer to the ranks of Organization and Methods is Shell-Mex and B.P., Ltd. A new department, under the management of O. J. Linforth, has been set up at head office.

The department, which super-

sedes a methods group formed in 1951, will consist of two sections. The organization section will (a) maintain a review of the division and grouping of duties within the company and will recommend to the general staff and industrial relations manager such changes as may be necessary to ensure the maintenance of an efficient organizational structure; (b) administer agreed changes in organizational structure after consultation with



O. J. LINFORTH... To manage Shell's new organization section

the operating departments concerned and, as affecting personnel, with the staff department; (c) survey the company's employing centres with a view to ensuring maximum efficiency and economy in the use of staff. The methods section will advise head office departmental managers and divisional managers on the methods used in any particular sphere of the company's operations.

## TV TUITION

**T**ELEVISION was used for the first time in Europe at a two-day conference organized by Brown and Polson, Ltd., to demonstrate selling techniques to their salesmen by means of playlets. In an adjacent studio, Frank Muir and Denis Norden, well-known radio scriptwriters, turned actor to perform in scenes which had been devised and produced by Henry Caldwell, B.B.C. television producer, in conjunction with Masius and Fergusson, advertising agents to Brown and Polson. These sketches were then televised to the conference room to illustrate salesmanship, both good and bad.

This was the first time that Brown and Polson had held a full scale sales conference. More than 30 specially-prepared papers were read by executives and covered buying, finance, manufacturing, sales and advertising.

## ACCOUNTANT'S SCOPE

**I**N too many firms, the accountant is still merely the man who keeps the books. In progressive firms, however, the scope of accountancy work has broadened widely in recent years. Just how far this trend has gone may be gauged from the summary given by S. C. Tyrell, chief accountant, Newton, Chambers & Co., Ltd., of the requirements to be satisfied in an accounting organization

These consist of:—

### 1. Routine service

- (a) The provision of periodical accounts in statutory form in accordance with the provisions of the Companies Act, 1948.
- (b) Financial reports for the information of the directors on the current trading results of the undertaking at each board meeting.
- (c) Reports on the fixed and liquid capital position at regular intervals.

### 2. Needs generally unrecognized or not fully realized

- (a) Capital expenditure forecasts for short and long term plans.
- (b) Cash and other fluid capital forecasts.
- (c) Trading account forecasts.
- (d) Reports on the incidence of taxation including forecasts.
- (e) Reports based on comparison of actual results with forecasts in each case.

### 3. Potential aids to management

- (a) Budgetary control of departmental production and services.
- (b) Standard costing.
- (c) Control of capital usage, including credits, stocks, work-in-progress, etc.
- (d) Moving annual total comparisons.
- (e) Statistical control of sales and distribution costs.

Mr. Tyrell was addressing a winter proceedings meeting of the British Institute of Management.





## EXPORT Case History 3

**TWIN SET:** To the makers, their bread and butter line; to the country, a source of valuable hard currency



Pringle's of Scotland have a name as manufacturers of quality knitwear. But to make substantial sales in the U.S.A. and Canada, quality and a name are not enough. Pringle's have realized this. They have devoted as much care and attention to marketing methods and policies as to manufacturing processes. Result: trebled overseas sales in the last five years.

# Well-Planned Marketing Boosted American Sales

By ROBERT SPARK

**M**ENTION the name "Pringle" to any woman and it is almost sure to arouse her interest. Such is the fame of the quality knitwear made by Robert Pringle and Son, Ltd., of Hawick. The reputation of this firm's products is equally high in many overseas markets, especially the U.S.A. and Canada. Yet before the war their exports were only a trickle, and cashmere—the soft luxurious yarn which is made into their famous twin sets and sweaters—was just becoming fashionable.

The success of Pringle's in the U.S.A. and Canada is the result of traditional skill, sound business methods and modern marketing techniques. Without the first, the Pringle reputation could never have been made; without the other two, an export sale totalling a million pounds a year could not have been achieved.

Perhaps the basic lesson to be

learned from this Scottish firm's experience is that to be successful you must be thorough. To build up and maintain and expand sales in such a changeable market as North America, nothing must be left to chance. Every angle connected with sales must be given equal attention—the product, packaging, design, delivery, sales promotion, advertising, publicity, salesmanship, display material and personal contact.

The most important element is the product and the ability to make it. Robert Pringle established his factory in 1815 to manufacture hosiery and underwear and it was not until 1920 that the firm started making outerwear. In the thirties, when cashmere became fashionable, Pringle's had the knowledge and experience to handle this difficult fibre which comes from the fleece of the Tibetan goat. It is this knowledge, plus the inherited skill and craftsmanship of the workpeople, that has been the biggest factor in the success of Pringle's. Modern methods of production have linked with craftsmanship to



**BASIC EQUIPMENT:**  
The power-driven knitting machine, which produces eight garments or parts, automatically shaped and sized, at the same time





# Pringle of Scotland

**SPRING EXPORT:** Fashion means something new. Here, it's the rounded V-neckline in a cashmere sweater. Colouring is beige and white—the name, "Nanette"

reach the twin goals of economic output and high quality.

Pringle's started exporting on a very small scale before the war and during hostilities they continued to sell knitwear in the U.S. market on a restricted scale. During the difficult years of 1942 to 1944, they continued to earn dollars for Britain. To-day, exports are 12 times the pre-war figure. Between 1948 and 1952, Pringle's overseas sales have trebled and they are still increasing.

The dollar market takes the lion's share of the output for export. For handling this business there are two subsidiaries: Pringle Johnston Imports Ltd., in New York and Pringle Johnson Canada Ltd., in Montreal. These are under the control of a resident director, Mr. Lewis Bannerman. The rest of the staff—about a dozen—are all Scots (a brogue is an advantage when you are selling Scottish knitwear to Americans) and they have all been trained at Hawick. Their training and technical knowledge puts them at an advantage when it comes to answering questions on manufacture; they know the answers and they do not have to refer queries to the factory.

## They Have "Class"

The New York and Montreal branches carry stocks, but most of the orders are forwarded to Hawick and despatched direct to the customer. The customer in this case may be any of the 1,000 Pringle stockists located all over North America and Canada. The list of their stockists reads like a directory of American "class" fashion stores... Bonwit Teller of New York, Saks of Fifth Avenue, Simpson of Canada, Nieman Marcus of Dallas, Bullocks of Los Angeles, T. Eaton of Canada are typical examples.

To speed shipments at critical "fashion periods," Pringle's make extensive use of air freight. Timing and quick delivery are two essen-



tials of success. Although stockists cover every area, the N.E. States, the Middle West and California (the "sweater state") are the best markets.

To promote sales, Pringle's run a limited advertising campaign in U.S.A. and Canada which is handled by their American advertising agents. A more extensive advertising programme is worked in co-operation with stockists. For retailers who want to run local advertisements, free blocks are available. The American agents work in close liaison with Pringle's London-based director of publicity.

Press and general publicity is in the care of a New York press and publicity agent—Ruth Hammer Associates Inc. They service newspapers and fashion magazines with details, photographs and features on the latest Pringle designs and also cover radio and TV. Advertising and publicity from the point of view of policy is guided and finally

decided by the executive directors of the firm.

Considerable attention is given to display matter available to stockists. Showcards, plaques, etc., are sent from England, but the designs are produced in liaison with Pringle Johnston to ensure that they are suitable for the American market. The products themselves are despatched in individual cellophane packs. These have the advantage of being light in weight and attractive in appearance, yet providing adequate protection and not obscuring the contents.

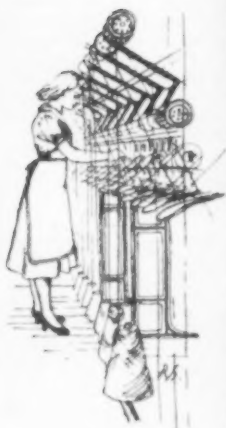
## Special Drives

Other facets of sales promotion are not overlooked and Pringle's are always willing to co-operate with stockists on special window displays or selling drives (these are other occasions when air freight comes in useful). A typical example of special sales promotion was when they supplied the Sadlers Wells Ballet Company with knitwear for their successful tour of the U.S.A. Although they are always looking for new ways to make people Pringle-conscious, Pringle's readily admit that in the end it is the high quality of the merchandise that counts.

Yet another important link in the sales chain is liaison with the buyer. This personal contact with the person who places the order is

**GREEN FINGERS** but not green labour : Girls at work on the skilled job of seaming and binding—that is, linking together the various parts of the garments





**CLASSIC GOLFER SET :** One of Pringle's young workers smilingly exhibits a finished golfer cardigan which will soon be part of a shipment to America

**AT THE CUTTING TABLE :** Girls rapidly cut out necks, etc., ready to have the binding attached



regarded as being of supreme importance and it is carefully cultivated. Apart from the resident U.S. and Canadian staff, a director from Hawick makes a comprehensive tour of America every autumn to strengthen the ties between manufacturer and retailer. American buyers visiting Britain are always invited to visit Hawick so that they can see for themselves the skill which goes into every garment and at the same time get the "atmosphere" of Pringle's. Personal contacts and visits to the factory also enable Pringle's to hear of stockists' requirements and obtain valuable marketing data.

Quality, salesmanship, publicity would not add up to much if the design of the knitwear was not "fashion right." To cover this important point, special designs are created for the American market.

### Check on Trends

This is the province of Mr. Otto Weisz, assistant managing director and his team of designers. Details of American trends are obtained from the American and Canadian staff and from buyers. Additional valuable market information is brought back by the Hawick director who has made a personal visit to the U.S.A. This accumulation of facts, ideas and suggestions provide Mr. Weisz with sufficient information to design the next season's range.

The designs themselves are essentially Pringle in creation, for the firm is in the happy position of leading the American buyer rather than the reverse. The American range usually consists of between 40 and 50 designs. These will include the classic twin set which Pringle's—rather prosaically—call their bread and butter line; sweaters for "round the clock wear" (that is general, afternoon, cocktail and evening wear); and the sports or outdoor sweater. These may be in cashmere or other fibres such as super Angora, Alpaca, lambswool and pure Shetland. Frequently new colours are also created for use in a new range and these are given attractive names that link them with Scotland.

Although on the home market demand exceeds supply, Pringle's have not neglected it. Here, too, careful attention has been given to advertising, publicity, sales promotion and stockist liaison.

One feature necessarily restricted to the home market is the

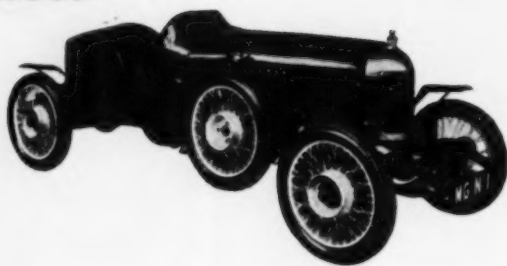
instructional course for sales staff. The idea behind these courses is to give the girl behind the counter—the only person who is in direct contact with the consumer—an insight into fine knitwear manufacture. Each course lasts two days and girls come from all parts of the country. Pringle's make all the hotel and travel arrangements and pay all expenses. Over 200 sales staff have taken the course since its inception 2½ years ago.

In assessing Pringle's record in America and Canadian markets, it is not easy to point to one outstanding reason for their success. The combination of skill and knowledge is, of course, responsible for the production of fine knitwear. But surely the moral to be drawn is that a quality product needs quality marketing, salesmanship, promotion and efficient management. It is this quality in all aspects of their business that has built up their export sales and made well-dressed women all over the world aware that Pringle of Scotland is more than just a name.



## EXPORT

Picture Story

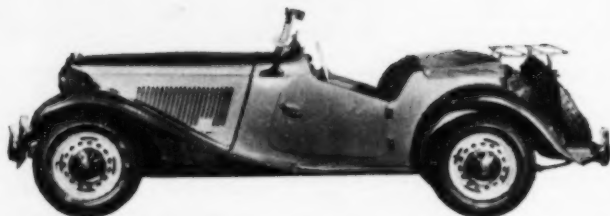


**THE FIRST MG**, introduced in 1923. The basic MG design as known today appeared in the thirties. U.S. sales hardly ever rose above a dozen a year and one distributor in New York was the sole representative in North America. There was no enthusiasm for the MG except among a handful of sports car fans; there was no sales pressure—in fact there was no market for a small, typically British car.

## Little Car with a Big Pull

*English as they make 'em, the MG tops American imported car sales*

**FOR** six years, British businessmen have suffered a surfeit of suggestions and exhortations on how to sell more to the U.S.A. Prominent among the ideas offered as the key to earning more dollars is the one that products must be designed to suit the American consumer. One of Britain's best dollar-earners—the MG sports car—is an anomaly in this respect. The MG is as English as mild and bitter, yet its U.S. sales record since 1946 has been phenomenal. The Americans have fallen heavily for the brightly-coloured MGs, yet there is no clearcut reason why. Reason or not, Nuffield's quickly realized that, basically, they had a winner. They teamed up with the Hambro Trading Co., Ltd., who became the sole concessionaires and who are the link with the network of distributors and dealers. Good promotion, keen and active salesmanship, backed up by first-class after sales service and maintenance, have converted latent enthusiasm for the MG into a profitable flow of dollars.



**THE LATEST MG**, the TD. Still the same basic outline as the Midgets of the thirties. Only minor alterations (left-hand drive steering, sealed beam headlamps, disc wheels, bumpers) were incorporated to suit the American market. Instead of sales by the dozen, they are now sold in their thousands. In 1946, 20 MGs were sold, in 1947 it was 250, and in 1948 1,171. Last year, 85 per cent. of all MGs exported went to the U.S.A.—a staggering total of 9,000, worth over ten million dollars.

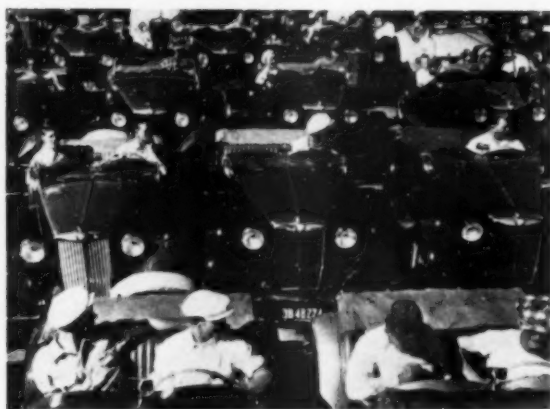


**MGs IN CALIFORNIA.** Best customers are Californians, who take 45 per cent. of the exports to the U.S.A.; New York area follows with 22 per cent. The enthusiasm of Hollywood stars, plus California's climate, helped to build up sales along the West coast. Other factors which have influenced sales in America: the war (when military personnel saw the MG in its native habitat); the versatility of the MG in traffic; the price (low enough to make it a proposition as a "No. 2 car"); and finally its appearance and performance which lend themselves to forming clubs, running trials and races, being "sporty" and impressing young women.

**BUSINESS**



**ATTENTION-GETTER.** The MG chassis above was displayed at the third annual Motorama in Los Angeles by Gough Industries Inc., distributors in that city. There are distributors in 12 key-selling states. Distributors not only supply to 410 dealers all over the country, but also sell to the consumer. Orders are routed through Hambro's, but shipments go direct from England to the distributors. Nuffield have two sales representatives constantly on the move in the U.S.A., who work in co-operation with Hambro's.



**BIG MEET IN RENO.** Above: "Biggest little city in the world" plays host to 100 MG owners. Occasion was the first annual rally of the Sports Car Clubs of Northern California. Such events, although not sponsored by Nuffields, have their blessing. Local promotion and advertising is left to dealers; Hambros run a joint advertising scheme with the distributors, while Nuffields run a limited national advertising campaign (handled by an American agency).

**DOLLARS IN EUROPE.** U.S. servicemen in Europe are also good customers for the MG. The American Air Force sergeant below is taking delivery of a car bought through the Post Exchange (American equivalent of N.A.A.F.I.). Of the 688 cars sold in Europe last year, 439 went to Americans in Germany and France; 210 were sold in Britain. All are paid for in dollars.



**LOW COST QUALITY.** Although selling at a relatively low price (\$2,100, or slightly higher in some areas), the MG is not quantity produced to the same extent as other popular cars. Craftsmanship still has a hand in its manufacture. After-sales service is adequately covered; all dealers and distributors must maintain spare parts to the value of £10 for every car operating in their territory. Nuffields also maintain a comprehensive stock of larger components in Chicago. Spares service therefore compares with that offered by American manufacturers.





# He Sowed Early —Under Glass

By RICHARD LAWRENCE

IN 1912, the late Major L. H. Chase invented the continuous cloche—a portable “glasshouse,” to protect and stimulate the growth of plants. Later, this invention was to bring in a new epoch of horticulture; in those days, however, the firm was a small concern, which dwindled to obscurity during the first World War. From 1918 until 1939, the Major modestly developed and marketed his cloches from a small one-storey building at Chertsey. Then, on the eve of the second world war, development assumed a more ambitious thrust with the passing of control to the Major's son, J. L. H. Chase.

Control changed hands at a vital time. Dunkirk was just ahead. Soon food supplies from Europe were being diverted into Nazi stomachs, and supplies from the Dominions and the Americans were being decimated by enemy

submarines. At home, commercial food growers were not enough, and the word was “Dig for Victory.”

That slogan was actually coined by Mr. Chase, and reiterated in his war-born booklet, *Cloches versus Hitler*. The slogan was taken over by the Ministry of Agriculture and used to incite a welter of horticultural activity that turned the flower-beds and playing fields of Britain into food-producing gardens and allotments. By mid-1940, market gardening and commercial growing had gained priority status, while a whole nation of families had turned to growing their own food.

These amateurs needed advice and guidance. Chase Protected Cultivation, Ltd., knew their needs, but it was still a small company, and in that winter and spring of 1940 the bulk of cloche output was being absorbed by

The “Dig for Victory” campaign produced a heavy crop of amateur gardeners. They needed equipment, seeds—and advice. By anticipating the scope of this big new market and supplying its special needs efficiently, one man himself sowed the seeds of a flourishing post-war business.

professional growers. After spring came the “slack season,” and the staff, all but nine, were transferred to armaments.

But Mr. Chase redoubled his efforts. He used the lull, and the manpower he had left, to introduce ways of advising as well as supplying the great new market that had opened up.

The extent to which he achieved his object is indicated in the fact that, within two years, the staff was increased to three hundred, and that, within those two years, he transformed his company literally from a small-holding supplier to a mass-producing industry of authority and importance.

How did he do it?

Firstly, the output of cloches was quickly stepped up by efficient re-planning of production methods and by redesigning the standard cloche to entail a minimum of wire—so forestalling pending shortages and making possible production figures which otherwise would have remained a dream.

Manufacturing processes are comparatively simple. Wire is bought in rolls and then bent to shape and cut to size. Mechanization has been limited, but the use of jigs and fixtures enables workers to secure a high output with semi-automatic machines. Glass is bought outside and, except for small amateur and export orders, delivered direct to customers.

**BUSINESS**



**SIMPLICITY:** Jigs for wire cutting and bending are the only fixed equipment in cloche manufacture







To ensure high productivity, all workers were put on direct production bonus. Even packing is on piece rate. As the labour force grew, a personnel manager was appointed and schemes for joint consultation introduced.

Secondly, the range of products was increased. A tomato cloche to protect and stimulate tall crops, such as tomatoes, peas and beans, was put into production immediately.

Experiments and development tests were set in motion, which resulted, within the war years, in the production of an electric seed raiser (a device proved to accelerate seed growth through soil temperature control); the lantern cloche for protecting such crops as cucumber and melon; adaptors and elevators, which gave to standard cloches the multi-purpose versatility that war-shortage growers urgently required; and, perhaps most enterprising of all, compost-grown seeds.

The addition of seeds to the product range was the outcome of casual experiments started in the pre-war years. There was sufficient indication that such organic methods would produce sturdier, healthier plants to decide Mr. Chase in favour of ordering intense concentration on commercial developments of those earlier



trial. A three-acre field was turned into a commercial installation; resultant mass-marketing of seeds showed a £3,000 return in one season.

Thirdly, towards helping allotment and other inexperienced growers, the half-acre experimental ground was increased in 1942 to 10 acres. Progressive trials on various aspects of vegetable development were carried out in one section; in the other, specimen allotments were worked to demon-

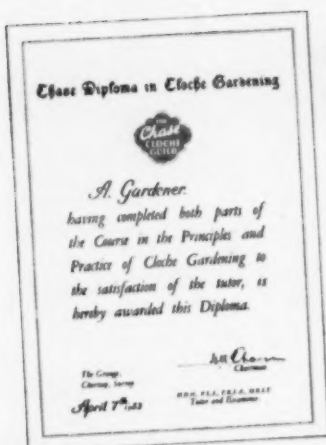


**J. L. H. CHASE:** For him, no division between theory and practice. The writer at his desk advises thousands of gardeners. The grower watches work on his own productive acres.

strate to the public how best to grow the food they needed. Regular "open days" sometimes produced as many as 4,000 visitors in one day.

Professional growers, too, were brought under the Chase influence, inadvertently, by the Surrey War Executive Agricultural Committee, who negotiated facilities for a demonstration to be attended by market gardeners on the company's experimental grounds. It was called off at the last minute, but Mr. Chase, alive to the value of these professionals' participation in his company's methods, went ahead with the arrangements at his own expense. It was a success that became a regular feature and, in conjunction with the "amateur" days, gave the rising company an enormous sales and prestige boost.

Fourthly, to develop further the spirit of enthusiastic interest aroused at these demonstrations, a monthly information bulletin came into being in 1942. A steady de-



**FOR GRADUATES:** This "Cloche Diploma" shows that the holder has taken a Chase course, passed practical examinations

For, when the approach of victory heralded an end to the false markets of war, and businessmen were deciding where to turn, Mr. Chase calculated that the nervous relaxation and the sub-conscious satisfaction that come with closeness to the soil was something a great many war-time gardeners would not want to give up. He reckoned, too, that plundered Europe would open up an export boom. He was right, and the development plans he visualized resulted in a new lease of expansion.

Up to this time, the company had operated from Chertsey. Improvisations had made the war-time growth possible; the greater expansion now planned rendered the existing premises inadequate. Thus, in 1946, new offices, factory and expansive grounds were bought at Shepperton.

Since headquarters were established there, export markets have

mand for this from all over the country emphasized the extent to which the company had grown. Mr. Chase wisely paused to consolidate his achievements, and out of the pause came formation of the Chase Guild.

Since its inception, more than 50,000 gardeners have joined the Guild. Its purpose, then as now, was to educate the amateur grower in how to obtain the most fruitful crops, and, at the other extreme, to keep the professional informed on the improved methods constantly being attained in the experimental acres. Its effect was to implant a far-sighted policy of prestige and business promotion.

Five things went into it: (1) the circulation to members of a monthly magazine; (2) scheduled tours of lectures; (3) periodical demonstrations on convenient holdings throughout the country; (4) a maturely devised correspondence course, terminating in practical examinations and, if passed, awards of the "Cloche Diploma"; and (5) a Horticultural Enquiry Bureau giving individual attention to members' problems.

### **He Saw Ahead**

This Guild was formed under war-time conditions, but the mind that shaped its policy was focused on the post-war market. The personal, "family" atmosphere and sense of pride in membership deliberately fashioned from the outset continued after the war had ended. So did the company's expansion, due largely to the policies and convictions of Mr. Chase.



## **4 WAYS TO BUILD A BUSINESS**

**Re-vamp production methods to step up output**

**Increase the range of products by producing variants for special purposes**

**Demonstrate product in use as widely as possible**

**Organize users to secure efficient use of product and continued sale of ancillary products**

been achieved in thirteen countries, the range of products has been further increased, and production capacity has been vastly expanded.

True, a proportion of the increase in product range is the outcome of experiments started during the war, but the progress is none the less impressive. Additional products include major contributions to horticulture. One of these is a compost manufactured from waste products, such as water-weed and spent coffee grounds. An outside invention produced and marketed by request—a compost activator—is proclaimed by independent authorities as "near-revolutionary" in its ability to convert waste products into rich soil food. To accommodate this product, compost bins were designed and mass produced; they, too, have been marketed with outstanding success.

Other products which seem to be gaining consistent success are slug-killers, declutchable glass-houses, a chick brooder put into production at the request of a Government veterinary station, and (more recently) soil pot machines, one type for amateurs and one for commercial nurserymen.

### **Export Growth**

Of these products, cloches, soil foods and seeds are being exported in quantity to thirteen countries.

Exports to New Zealand began soon after the emigration, in 1946, of an English grower expert in cloche methods. He started a holding with cloches; wrote lectures and broadcast on cloches. Chase Protected Cultivation, Ltd., gave full co-operation, and, for some years now, commercial growers throughout New Zealand have been using British-made cloches on an extensive scale.

In the same year, feelers were put out to test the American market prior to starting a build-up. The new compost-grown seeds and compost activator were advertised in American magazines. Reaction was prompt: dollars arrived by post, and orders were fulfilled by direct mail. Indications were that U.S. sales potential justified full-scale export marketing. Subsequent steps saw the registration in America of "The Chase Company of England," and the establish-



**INDOOR SHOW :**  
Chase took  
London's Royal  
Horticultural Hall  
for his Modern  
Gardening Exhi-  
bition last year

ment of two bases in the East and West, from which a sales network is being built.

Exports to Austral'a began in 1947. Such was the demand that cloches are today being manufactured in that country under licence. Local manufacture under licence has also been necessary to meet demand in France, Belgium and Finland, while direct exports from Shepperton are going to Sweden, Holland, Cyprus, Switzerland, South Africa, Canada, Kenya and the Channel Isles.

### Development Plans

Exports take a prominent place in the company's future plans. Arrangements for more intense marketing in countries at present importing, and negotiations for opening up demand in new territories, are well in hand.

In Britain itself, sales promotion is being stepped up. In the past it has been developed by direct mail, by normal publicizing methods, by extending the scope of the Chase Guild, and by exhibiting at the Royal Show, the Chelsea Show, some dozen county shows each year, and other horticultural gatherings.

Considerable emphasis is still placed on mail order selling. There are two main reasons for this. First, selling through retailers demands capital for retailers' credits,



and Chase, like many another firm that has expanded rapidly in the last few years, have to keep a close eye on their working capital. Even more important, however, is the fact that mail order gives a direct link with the consumer that, properly handled, can lead to repeat sales. With the retail store, the customer remains anonymous. Often, he may be dissatisfied with the results he obtains simply because he is not using the product properly—and there are few retailers equipped to give expert technical advice in this field.

### Stress on Skill

Mr. Chase has always stressed the necessity for expert advice. A handful of highly-qualified horticulturists are always available at Chertsey to answer letters from Guild members, or to show casual visitors round the grounds (which are run, on Chase lines, as a normal profit-making market garden). These experts, moreover, are not mere theoreticians; as a matter of

policy, they are switched for a considerable period of each year to the bread-and-butter work of growing crops.

Mr. Chase's insistence on skill does not stop here. All members of the staff are actively encouraged to improve their capacity. Attendance at horticultural conferences and at evening and weekend courses run by the local education committees are paid for by the firm. Non-technical conferences are also used widely. Of 180 workers, 45 have attended one or more of the Ashridge courses, while a number of lads have been sent to the "Outward Bound" Sea School.

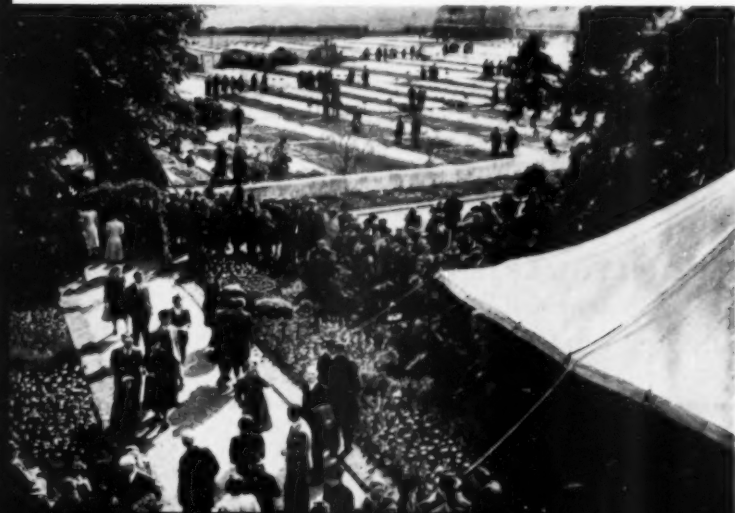
The Modern Gardening Exhibition, held last year at London's Royal Horticultural Hall, was a measure of the success of Chase Protected Cultivation, Ltd. It was organized by Chase and was primarily devoted to the company's methods and products, end-products of which were represented in fruit, vegetable and flower-growing features. There were, for example, salad demonstrations by such top-rankers as Jill Allgood and Bebe Daniels; displays of cigarettes, home-grown, cured and made; home-grown vines and the home-made wines from them; and the latest developments exploiting seaweed in horticulture.

This was a major accomplishment for a company which, in 12 shortage-bound years, had risen from obscurity to the very top rank of the horticultural industry.



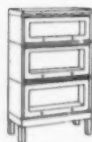
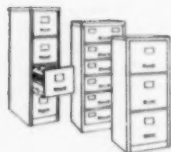
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**BUSINESS**





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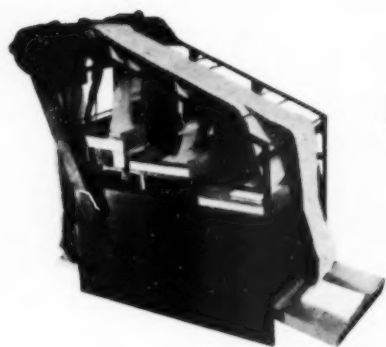


## ART METAL CONSTRUCTION COMPANY

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# Continuity Saves Two Days a Week

**Fundamental contribution of continuous stationery to office efficiency is increasing production speeds. But, with good systems planning, many other advantages can be obtained. Repetitive work can be reduced and routines simplified—without any substantial capital expenditure.**

**T**HE fundamental advantage of the continuous form feed principle is improvement in speed of output. The routine of a typist at work, for example, can be divided into three stages: "make-ready," "production" and "after work." The three elements together make up the total "time for the job."

Any time to be saved must obviously be in the "make-ready" and "after work" stages. If for example, stage one takes 1½ minutes, stage two, 6 minutes and stage three, ¼-minute, the non-productive stages together will take 25 per cent. of the time for the job.

If the first and last stages still take 2 minutes but the typing time only 1½ minutes, the proportion susceptible to saving will be 57 per cent.

Extensive time studies have been made on typing routines involving the use of continuous stationery. A thorough check in my own offices has shown that the times and savings quoted are conservative rather than exaggerated. Actually, in the best possible conditions, my own typists returned figures which were comparable within fractions of a second.

In a test with a seven-part set

of invoice forms, time study figures for assembling and collating seven forms and six carbons, knocking them into alignment, inserting them in the typewriter, re-aligning and subsequently removing and separating the forms and carbons, amounted to 57.5 seconds. The nearest approach to this figure attained in my own test was 58 seconds.

Using the same form set-up in continuous stationery, total unproductive time was knocked down to 5½ seconds, showing a saving of more than 50 seconds for each set of forms typed; or 14½ hours saved on 1,000 sets of forms.

If the forms concerned were ten part, the savings would be even higher, amounting to 22 hours per 1,000 forms. These savings are not theoretical, they are factual, and can be achieved with no higher general level of efficiency than that already ruling in the office concerned—in other words, they are the savings achieved by a change of method for precisely corresponding operations: they do not depend on extra effort on the part of the typist, in fact, just the reverse.

Other advantages offered by continuous stationery are:

1 Automatic alignment of forms—especially important when dealing with pre-printed forms.

**By J. F. FEWINGS-TATE\***  
*O & M Executive,  
Anglo-Iranian Oil Co., Ltd.*

2 Facility of tied forms for subsequent handling and additional entries. This advantage is peculiar to two styles of stationery, fanfold and stub-tied sets. Examples of these advantages are provided by:

- (a) Delivery note and receipt note detached as one.
- (b) Invoice, day book and statistical copies retained intact for later pricing.

3 In each of these and similar cases, carbon sheets can be slipped between the copies. The carbon sheets are self-aligned by the fold of the forms. Alternatively, a hard carbon surface can be applied to the backs of the forms in the areas required to be post written. This expedient is usually adopted in the case of delivery oblique receipt notes on which a signature is required. It is much more convenient and safer than loose carbon.

The handling of carbon paper is reduced to an absolute minimum—perhaps once in 50 or 100 sets according to the method selected, and although this is perhaps chiefly appreciated by the typist, it leads automatically to yet another advantage, i.e., economy of carbon. The average copy-typist does not use carbon paper more than eight to ten times. Against this, a continuous system can employ the same carbons over and over again with completely satisfactory results.

All these advantages apply, too, to the manual use of continuous stationery, for example in desk or

\*Condensed from a paper read to a conference organized jointly by the Sheffield branch of the Office Management Association and the Office Appliance and Business Equipment Trades Association.



portable registers. Finally, the use of continuous stationery with any kind of automatic machine enables vastly improved machine times to be achieved, so that the theoretical output of the machines is very closely approached by the actual production level. This is notably true when continuous forms are used with punched card tabulators, for example, or addressing machines.

### Better System Building

The direct or physical advantages which accrue from continuous stationery are, however, but the base on which much more valuable savings and economies can be built.

In almost any office, one is impressed by the amount of repetition which takes place. The same information inevitably turns up in separate departments of the same organization; but the office manager will surely see to it that the information is produced once only in such a manner that all—and only—the essential number of copies are made at the same time.

A typical example of repetitive records, is a system which lends itself to co-ordination and preparation with a single writing operation, viz:

- 1 Invoice
- 2 Day Book
- 3 Forwarding instructions
- 4 Consignment or delivery note
- 5 Consignment receipt
- 6 Statistical record
- 7 Traveller's copy

In the case of the consignment note and receipt note, narrow copies can be employed to omit prices.

Think of your own businesses in the light of this example and consider frankly how far this common sense principle could be applied to the preparation of your basic routine documents. Better still, perhaps, invite the critical examination of the stationery and machine manufacturers. From my experience I can assure you that you can expect from them a realistic report and recommendations. No reputable firm would recommend a continuous writing system where, in fact, no genuine application existed.

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The same economies and advantages could be applied to the preparation of handwritten records. In the case of fully automatic machine written records such as those prepared on addressing machines and punched card tabulators, the savings effected take the form of greatly increased machine output — obviously a factor of the greatest importance in relation to machine costs. Maximum machine output is achieved, since there is no need to stop the work for the insertion of new stationery.

### How to Choose Stationery

There are two principal styles of continuous stationery used in typewriters, namely, interfold and

fanfold. The essential difference between them is that the interfold consists of separate lengths of paper collated together to form an original document and its related copies, whereas fanfold stationery consists of a single web or width of paper printed across the web in such a way that the copies fall into their correct sequence when the paper is folded fanwise. The folds or creases thus formed are perforated for subsequent separation.

Alternative methods of carbon feeding can be adopted with interfold stationery, one with continuous carbons running throughout the length of the forms and torn off with the written forms on the completion of each set of documents, the other with a single set of carbons attached to a glove through which the forms are threaded. In the latter case, the carbons literally move from one set of forms to the next, each set of carbons lasting for 50 sets of forms.

A third method of obtaining copies dispenses with carbons altogether. The copies are obtained by a multi-ribbon device on the typewriter.

With fanfold, the position is simplified in that one form of carbon shift device is employed in all cases, i.e., "floating" carbons which are moved mechanically from the completed set of forms to the next set in a typewriter with continuous form feed mechanism either attached or built into the typewriter. In the latter case, some ingenious all-electric machines have been developed which include automatic carbon shift among their electric operational features. In the case of fanfold forms, 100 to 150 sets can be typed without changing the carbons.

The question immediately arises: Which style of stationery should I choose? I only wish the answer could be framed in as definite terms as the question! The matter may be regarded from two standpoints which overlap but are, nonetheless, separate:

For technical production reasons, it will usually be cheaper to use the interfold type of stationery for quantities of less than 50,000 sets. But if you are planning a system, you will wish to consider whether any saving in basic cost of material is being made at the expense of other efficiencies. Still

### 7 GAINS FROM CONTINUITY

1. Increased speed in routine typing or manual clerical procedures
2. Automatic alignment of forms
3. Forms may be tied together throughout processing
4. Handling of carbon paper reduced to a minimum
5. Greater economy of carbon paper
6. Machine speeds can be increased (e.g., punched card tabulators)
7. Collation of forms is facilitated

# Marshal Your Records

Whilst documentary records are an integral part of business routine, they can be trouble makers when they are allowed free rein. They can so easily lead to wasteful repetition and provide a fruitful source of documentary disagreement.

Control them; eliminate the redundant element, and they become your obedient servants.

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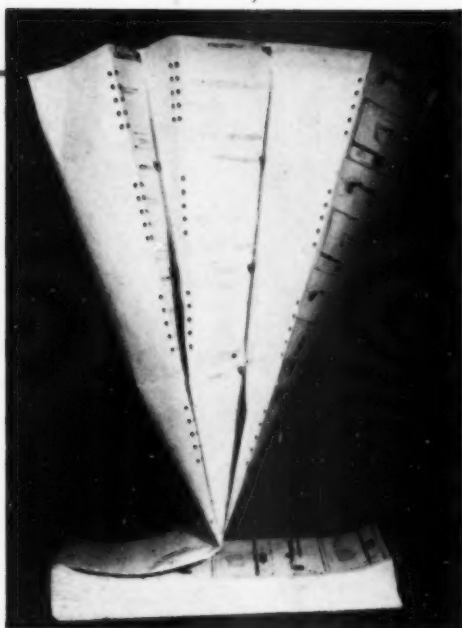
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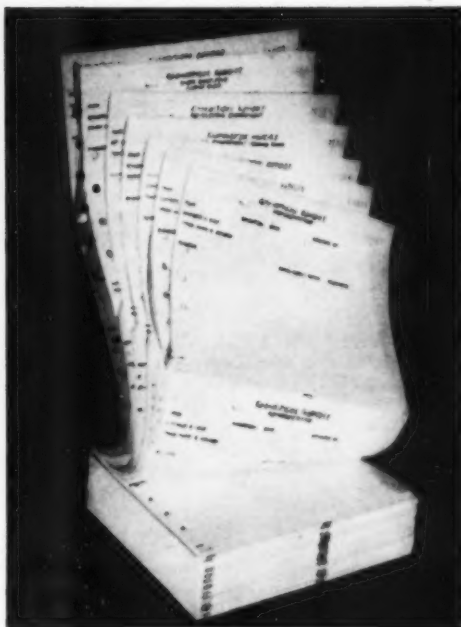
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**Fanfold (above):** A single sheet printed across the web so that copies fall into correct sequence when web is folded fanwise. **Interfold (right):** Separate lengths of paper collated to form an original document and its related copies.

## TWO FORMS OF

## CONTINUOUS STATIONERY



speaking in general terms, I would say that interfold is completely adequate for any number of parts up to five at the very least, as far as considerations of registration are concerned. Above that number, 100 per cent. registration (this is only my personal view) is not easily achieved—unless, of course, the positive pin-wheel sprocket type of machine is used.

Interfold has certain advantages of its own: the additional apparatus can be so simple as to be almost non-existent; there is no restriction whatever on the use of different coloured papers for each part; when a typewriter is not employed all the time on continuous stationery work, there are sometimes certain advantages in having nothing to move out of the way before proceeding to separate sheet work.

Fanfold comes into its own when the quantity of work going through is of such a volume as to justify an order of, say, 50,000 to 75,000 sets at a time; when six or more parts are required to each set and whenever the typewriter

will be constantly engaged in routine work of this nature.

There may be advantages in keeping certain parts of the set together until the later stages of the operation; fanfold obviously scores in this respect. Again, problems of collation into different groups can often be most economically solved when fanfold sets are spread out, one on top of the other, at intervals during the day or at the end of the day's work, and then separated *en masse* so that the filing copies, mailing copies, etc., are automatically brought together.

### Ingenious New Punched Card Developments

Two recent developments with punched cards have impressed me greatly.

One application, which is not novel but extremely ingenious, is concerned with the preparation of narrative matter on punched cards at the same time as multiple sets of forms are being prepared. In

one instance, employing the flat-bed type of machine, a card of the hand-punched and needle-sorted type is inserted above the multi-part set, and certain details which are later to be punched on to the cards are typed at the same time as the set is prepared.

In a second, two standard automatic punched cards have descriptive matter typed upon them in front of a four-part set, using a normal manual typewriter, with a front feed device. Thus the punch operator is provided, not with an original document from which to copy, but with a card with the information already written on it by a method which automatically ensures agreement with the written document concerned. She therefore has only to convert the relevant portions into punched symbols. Such cards, pre-interpreted as it were, could of course provide a visual card index for hand manipulation in addition to the more normal use on the punched card installation.

## Short Cuts to OFFICE EFFICIENCY

### Cutting Filing Costs

**I**NDISCRIMINATE paper saving" is a very wasteful practice, as one large organization discovered not very long ago. On checking up, they discovered that 90 per cent. of the requests received by their filing department were for records less than six months old. Only one per cent. were for records over a year old. Further investigation showed that it cost nearly £50 per year to maintain a single four-drawer filing cabinet and its contents, when supplies, floor area rental, filing clerks' salaries, and other factors were taken into account.

Thus, anything that can be done to reduce the number of active filing cabinets in a firm will pay handsomely. The firm mentioned found a solution to the problem by doing four things—

First, they put the problem of retention and disposal of records in the hands of a single authority,

who had the power to put a plan into action and see it enforced.

Second, they produced a time classification for all types of records. This was entered on the correspondence, etc., at its point of creation or entry into the organization. For example, "D" on a piece of correspondence might

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**Office Equipment at the B.I.F.**  
*is reviewed in the B.I.F. Section commencing on page 91.*

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**Director's Office of the Month**  
*will be resumed in the next issue of BUSINESS.*

---

indicate that it was to be kept for a minimum of six months and a maximum of nine months.

Third, they went through all the records already in existence to find out what degree of duplication occurred; then considered how this survey could lead to the elimination of any unnecessary records.

Fourth, they checked their revised filing system and decided

where different records should be held for their allotted life, i.e., office of origin, central files, or storage department. The latter was some distance away in non-office premises with a lower rental.

### For Writing Memos

**D**O you write a lot of memos and do you call in your secretary every time you want to dictate one? If so, you are wasting your own time and that of your staff. That was the conclusion one executive reached. He found the answer to his difficulties in a small portable registrator. Now he scribbles the memo on the registrator, tears off the top copy to go to the addressee and the carbon copy automatically remains in a separate compartment of the unit.

The continuous stationery used is printed with an appropriate heading (including his name, which saves writing). Not only does the system save time for both the executive and secretary but carbon copies come automatically in date order. The registrator is quite small and is easily kept out of sight in the executive's desk drawer when not required.

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**Operational Ease**—mere insertion of card secures clear registration, correctly placed and automatic printing in red of all lost time over time, visible to the employee and assisting the wages and department.

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**BUSINESS**





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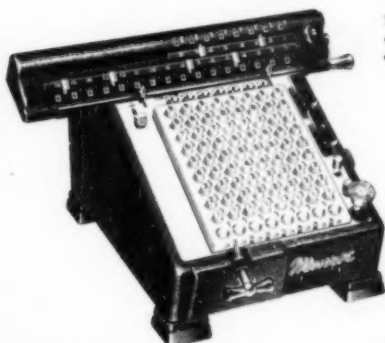
Getting coal means looking after the hundreds of thousands of men in this nationalised industry who hew it. There are also the employees in colliery, area, divisional and headquarter offices whose welfare is an essential part of N.C.B. management.



The N.C.B. Superannuat on Scheme cal's for a wide range of calculations and takes full advantage of the versatility of the Monroe Calculators now in constant use throughout the National Coal Board's offices.



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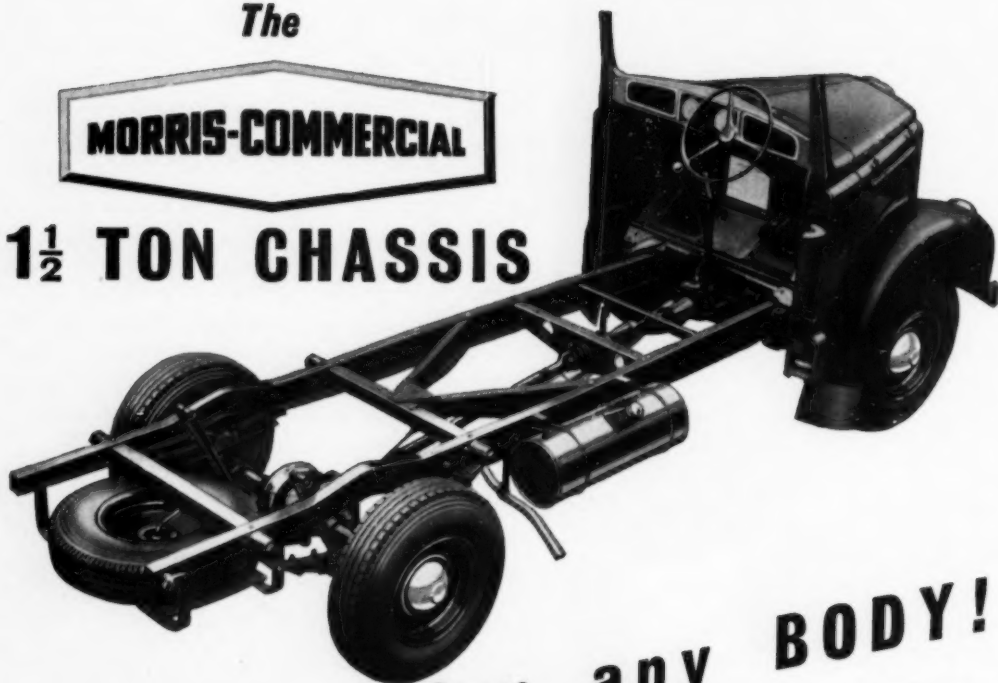
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*The*



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The Morris-Commercial 1½ tonner is the toughest standard drop-sided truck on the market. Its all-steel, **three-seater** double-skin roofed cab is fitted with wide bench seat, the driver's section being upholstered in Dunlopillo. These are features usually associated only with "big truck" practice.

As a drive-away chassis complete with front end scuttle and windscreen pillars, it forms the ideal basis for a wide variety of body styles.

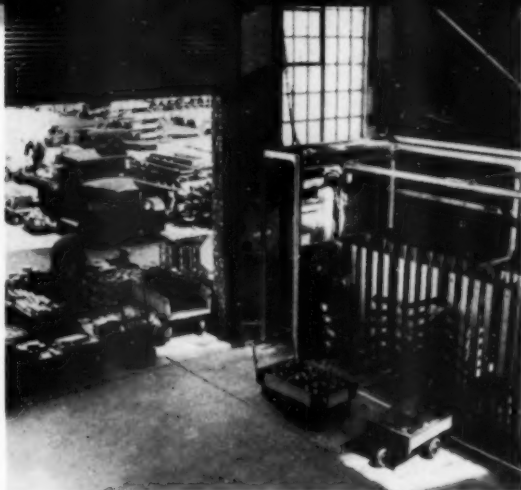


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**ARRIVALS.** (Right) A few of the 50,000 items on their way into the stores

**EXPANSION.** (Foot of page) Space was saved by building one tier of stacks on another



Orders on Leyland Motors' huge service stores at Chorley can be fulfilled within 15 minutes (in the case of personal callers) and 30 hours (for places as far distant as Montreal). Here is a description of the reorganized physical and paperwork systems that led to this remarkable performance.

## THIS STORAGE METHOD GIVES—

# 15-Minute Service on 50,000 Items

By BRIAN CUMMINGS

**A**LMOST every organization has its stores problem, none more so than the firm that has been in business for a number of years and has accumulated a variety of lines requiring spares and service.

Leyland Motors, Ltd., of Lancashire, are in this position. For some 50 years, they have been supplying the world with all forms of road transport vehicles, as well as industrial units such as compressors and generator sets. In that time they have accumulated lines and models requiring tens of thousands of spare parts, all of which must be available at a few hours' notice if their reputation for service is to be maintained.

For many years, Leyland service stores were accommodated inside the boundaries of the branch factory at Chorley. Ultimately, these premises became inadequate for

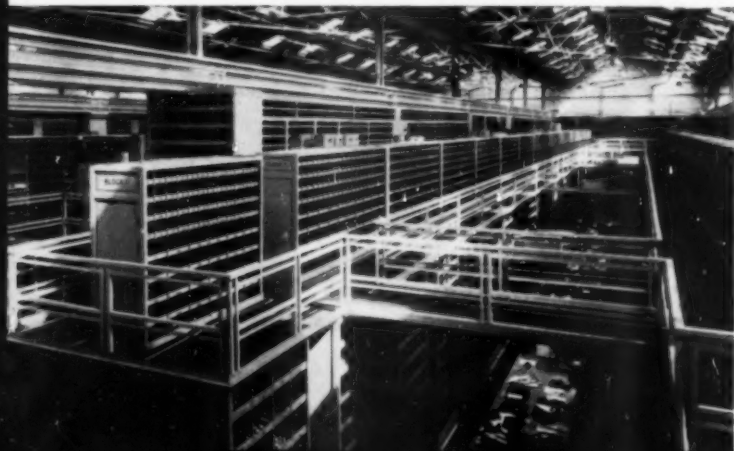
the work in hand, and a decision was made to move the stores to another building on the Chorley site. The new premises offered a floor space of only 38,000 sq. ft., compared with the 81,000 sq. ft. previously available. Nevertheless, all the material was accommodated and provision was made for future expansion. A description follows of how this was done by Leyland's own staff.

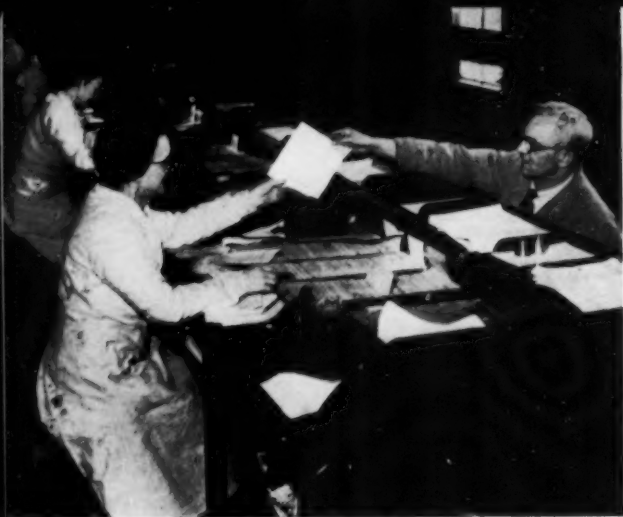
The space problem was solved by building upwards instead of outwards. At ground level, the store bins were built into stacks which were then arranged in rows

running the length of the main building. Passages were introduced in order to break the stacks and ensure maximum accessibility. Then a second floor was created by bracing the lower stacks and adding another tier which could be reached by a staircase. The upper floor was simply laid on the tops of the ground level stacks. The whole was arranged so that another floor could be added if the need should arise; the main building would, however, need to be strengthened for the purpose.

All bins were numbered, and on the ground floor long benches were placed for making up orders and also for storing sub-assembly kits. All other items were stored in bins, racks or enclosures, and many of these were specially designed for particular components. Every propeller shaft, for example, is held in strong spring steel clips attached to the back of the bin. A bar hooked across the front of the bin prevents the shaft falling out.

Other and still more unwieldy parts, such as exhaust pipes, are stored in railed-in enclosures. When these enclosures had to be arranged on the second tier, wire mesh guards were fitted to obviate





the danger of a heavy part falling to the ground floor.

Many different shapes and sizes of bin were needed, and much intricate work had to be done before they could be accommodated in stacks of uniform outer dimensions. The work of fabricating the bins was carried out in the tinsmiths' shop at Chorley, and a special night shift was introduced for the purpose. Chorley blacksmiths and boilermakers did all the structural work required for the manufacture of stairways, catwalks, handrails and the reinforcement of base stacks.

All the woodwork, including the panelling of the fine reception hall, was carried out by maintenance carpenters and joiners. Leyland electricians installed the cable trunking, conduit and wiring for 35 heater fans, one overhead crane, 380 bin lights and 100 roof lights.

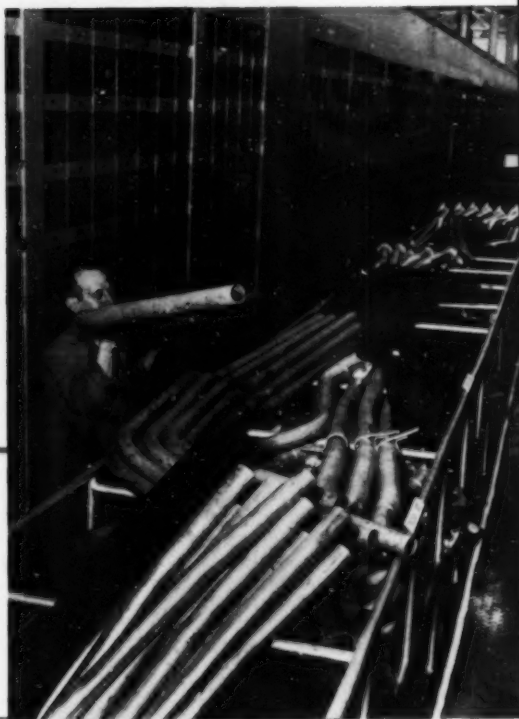
Only 11 months were needed to plan the new stores and put them into operation. In that time, 49,000 different stores items were transferred from one building to another without interrupting service to customers.

Most of the withdrawals were made on Saturday mornings, but movement into the new stores went on all through the week and coincided with the arrival of new stocks from outside suppliers and Leyland factories. A temporary card index was created to link the location of all the items in the old building with that of the same parts in the new stores.

With the new building went a new paperwork system—also de-

**HANDY HEIGHT.**  
Above: Desks were specially designed to hold stock cards at a convenient level.

**BEHIND BARS.**  
Right: Large and cumbersome parts, such as exhaust pipes, are kept in railed off enclosures.



vised by Leyland staff. Stock cards are maintained in the stores office by a group of clerks sitting at desks which have been specially designed to accommodate the cards in convenient positions for ready reference. (See picture on this page). Nothing goes into, or out of a bin until *after* the movement has been recorded on the stock card. This unbreakable rule is the basis of what is claimed to be a watertight system of control, for there are no bin cards and "cooking" the records is impossible.

### Form System

Orders from customers, agents and depots for spares and reconditioned units are received first in the service office, where a six-part document is made out consisting of: (1) stores order; (2) despatch copy; (3) Chorley advice note; (4) packing note; (5) invoice copy, and (6) service order (which is detached and retained in the service office).

The top copy of the set has space for the customer's name and

address, the Chorley reference number, the date, the customer's order number, the date despatched, the means of transport and whether carriage is paid. There are columns for bin numbers, part numbers, descriptions, quantities required, cash, and numbers to follow. On subsequent copies, the heading material is varied to suit particular purposes, while selective carbonization ensures that only relevant information is passed to the sheet below.

The completed set now goes to the stores, where it is passed down the line of clerks controlling stock cards. Each of these girls takes the order in turn and checks her particular batch of cards to see whether supplies are available. If all is well, she ticks the items on the order, enters the customer's name on the stock cards and the bin numbers on the stores copy of the set.

This process is repeated right down the line until the set is handed to one of the storekeepers, who deals personally with the entire order. Once the order has been assembled by the store-



keeper, the set of documents is broken up so that the separate leaves can go to their respective destinations. The movement of despatch, advice and invoice copies is self-evident; the top sheet, however, goes back to the service office as their notification that the order has been completed, or fulfilled as far as stocks will allow.

When a girl has an order calling for a part which cannot be supplied, she marks the source of supply on the stores order, thus indicating to the storekeeper that this part cannot be supplied. The documents then go through the despatch department, etc., for the order to be honoured as far as possible.

### Shortage Section

The service office know from the "To follow" column which are the incompletable items, and they issue another six-part set of documents headed "Shortage" which carry the same continuity number in the top right-hand corner; to this number is added an oblique stroke and the figure 1, 2, 3, etc., to indicate the number of times the order has been submitted to the stores for completion of the short items. On the shortage orders, the source of supply is repeated, and such orders then go straight to the shortage section in the stores.

Before any incoming goods are put into stock, the shortage section

has first call on them to honour any outstanding orders which are being held in abeyance. The outstanding orders are thus honoured immediately stocks are received. The fact is recorded on the normal stock card, and the residue is "booked in" on the stock card, thus bringing these particular items back to a situation where stocks are held. Working in conjunction with the shortage system, there is a section of the stores whose whole-time occupation is the urging of parts which are outstanding from suppliers.

### Over the Counter

Although the system was primarily designed for stores to be despatched, it applies also to an "over-the-counter" service which is operated for anyone who likes to call at the Chorley premises. Many people take advantage of this, including operators of big fleets of vehicles who send lorries

once a week to collect the spares. Personal callers are booked in and out as a check on the time taken to deal with them.

*A casual glance at the record will show multiple orders that have been fulfilled in less than 15 minutes*

Since the stores were moved to the new premises, another 1,000 items have been added to the numbers in stock. This brings the total to 50,000, representing a value of about £750,000. Total staff is just under 100, and their output can be measured in terms of weight (an average of 195 tons despatched every week) and quantities of timber used for packing (about 75 standards during the past 12 months).

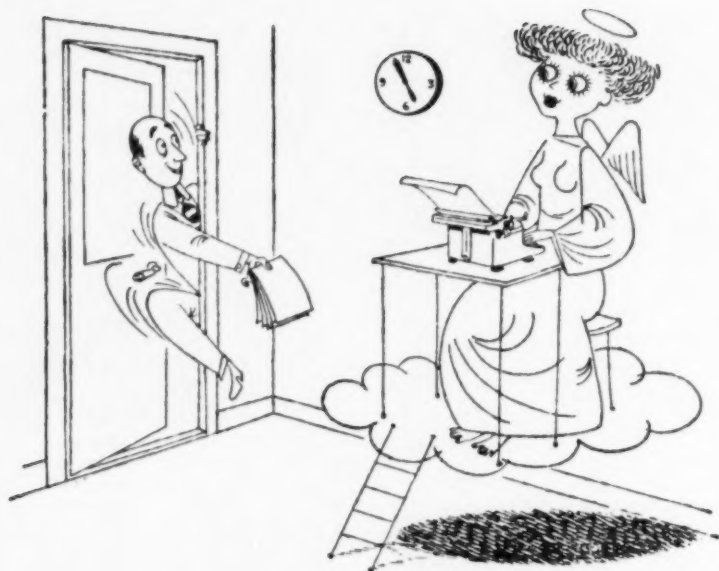
Despite the increasing complexities of his job, the Stores Controller can still quote—with the aid of air freight—a 30-hour delivery service for places as far distant as Montreal. And that should be good enough for anyone.

**DEPARTURES. Right:** The packing and despatch department, where orders are crated for delivery all over the world

**VARIETY. Below:** The many parts for an order are collected together in the stores








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# HEATING and VENTILATION

**I**MPORTANT factors in the creation of comfort conditions in a factory are its heating and ventilation. While we are, as yet, unable to control the climate outside our buildings, good design and planning coupled with the proper mechanical equipment can give us the internal "climatic" conditions we desire.

The type of heating installation employed for an industrial building will depend upon several important considerations: firstly, the type of work carried out in the building and the temperature required in relation to outside temperatures; secondly, the methods employed in the construction of the building, the materials used, and the cubic space to be heated; thirdly, the source from which the heat will be obtained.

Taking these considerations in the order set down, the desired temperature inside the building must first be determined in relation to the work carried out. For example, where workpeople are continually on the move, or engaged in activities requiring considerable physical exertion, a suitable temperature will be lower than that required in a packing-room or other place where the work is primarily sedentary.

When considering the amount of heat required in a building, it is usual to work in relation to an outside temperature of 30°F. The following table gives the internal

temperatures and natural air changes generally recommended for use in Great Britain.

	Air changes per hour
Offices, drawing offices, etc. 65°F	1-2
Manufacturing buildings (light work) ... 60°F	1-1½
Manufacturing buildings (heavy work) ... 55°F	1-1½
Warehouse and stores 50°F	1-1
Lavatories and cloak-rooms ... 55°F	1-1½

The work of designing a heating scheme for any type of building is a complicated matter, which should be carried out by an experienced heating engineer in

conjunction with the architect; but there are a number of general principles which may be of assistance to factory owners when they are considering the heating of either a new or old building.

The first important point is the general classification of heating systems. They fall into two broad classes:—

(1) **Local heating systems** are those in which the heat is generated by apparatus placed in the room to be heated. The obvious example is the domestic coal fire, or its workshop equivalent, the closed slow combustion stove. Other local heating systems in-

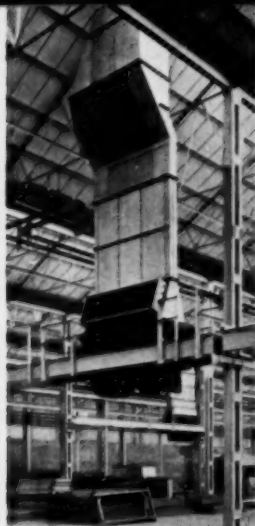
clude gas and electric heater units, etc.

(2) **Central heating systems** are those in which a central boiler house is provided for the generation of the heat, which is then carried to the areas to be warmed by means of ducts, pipes, etc., via the medium of steam, hot water, or warmed air.

The type of building to be heated will be one of the factors governing the choice of system. For manufacturing buildings that are widely scattered—making long pipe runs necessary, with consequent heat losses from heating mains—a local system may be the more economical. This is also true for buildings like warehouses, where heating is only required in certain areas. But in general, for a factory of reasonable size a central heating system is both efficient and economical. Such a system, which can serve many rooms or separate buildings, requires a single central boiler installation. This can be automatically fired and may be designed to provide, not only heat, but also hot water or steam for factory processes, with the minimum of supervision and attendance.

The range of fuels available for a central heating system is considerable, including solid fuels, gas, electricity, and oil. The choice

By **EDWARD D. MILLS**  
F.R.I.B.A., F.R.S.A.



**POWERED INLETS:** In this factory installation, fresh air is drawn in direct and heated by units either mounted on an external wall (above) or operating from roof inlets (left)

Courtesy of G. N. Haden and Sons Ltd., London, and Leyland Motors Ltd., Leyland, Lancs.

will depend on availability, price, space available for fuel storage, labour available for stoking, etc. These factors must all be carefully considered.

Where space is at a premium, a gas-fired installation or an electric thermal storage system will warrant careful study, as neither requires extensive fuel storage space. Both systems can also be made automatic, reducing attendance to a fraction of the labour required in connection with solid fuel burning appliances. Oil, gas, and electricity are all very clean in operation, and even solid-fuel boiler firing can now, by means of mechanical stoking equipment, be planned so that it is easily and cleanly carried out.

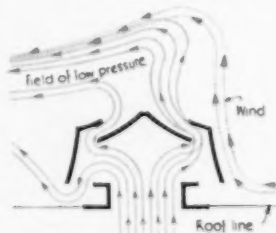
The number of heating methods suitable for industrial use is considerable; a few of those more commonly used are briefly described.

Although closed solid-fuel-burning stoves are still used for heating in some industries, they have too many disadvantages for general use. A cleaner and more convenient alternative is the type of gas or electric radiant heater which consists of a panel of refractory material, heated to a high temperature and mounted overhead to face downwards at an angle. These fittings are very efficient and therefore economical to run, and are particularly suitable for areas requiring intermittent heating. In certain instances, however, the high surface temperature of the fitting can be regarded as a fire hazard; and with

the gas-operated units, which are flue-less, the products of combustion escape into the room.

A very popular form of industrial heating, particularly where large open areas are involved, is the unit heater. This heater consists of an electric fan which blows air over a heater coil, the air thus warmed being directed into the room by a series of louvres. There are two types—the floor-mounted heater and the suspension heater. The direction of the warm air flow can be controlled by adjustable louvres on the face of the unit, and in warm weather the heating coil can be cut out and the fans operated to provide air circulation.

The most satisfactory type of unit heater is the steam-operated one, but the heating coil can also be warmed directly by gas or electricity, or by hot water from a central source. If the heater only recirculates the air within the factory, this is, naturally, the most



**NATURAL OUTLET:** No power is required for this roof ventilator. Air is extracted by the "suction" due to wind deflected by the curved sides  
Courtesy of Colt Ventilation Ltd., Surbiton, Surrey

efficient application of the fitting—but it does not provide any air change. The units can therefore be fixed close to an external wall and arrangements made for fresh air to be drawn from outside for heating before discharge into the factory. Where spaces are large and the noise of the fan is not likely to become a nuisance, unit heaters provide a satisfactory and economical form of space heating.

The most widely-used medium for the heating of buildings of all classes in this country is low-pressure hot water. It can be used in a great variety of ways; it is simple to operate and control. Hot water systems are clean, safe and quiet in operation; they work at a surface temperature which is not high enough to burn, nor does it cause stuffiness.

## Heating Surfaces

Such systems require considerable heating surface for radiation, but it is generally true that the greatest comfort is secured from a large heating surface at a comparatively low temperature. The necessary surface can be provided in a number of ways, the cheapest being by exposed circulation pipes. Other means include cast iron radiators, convectors, flat panels, and small-diameter copper coils embedded in walls, floors or ceilings. This last method works with circulating water at about 120°F, giving a surface temperature in the region of 90°F, and among its merits is the fact that while it provides a very pleasant warmth, there are no fittings, radiators or appliances visible in the room.

In many factories, steam is required for factory processes and it is therefore desirable to consider its use for heating. Unit heaters operated by steam have already been mentioned, but steam can also be used for heating coils and



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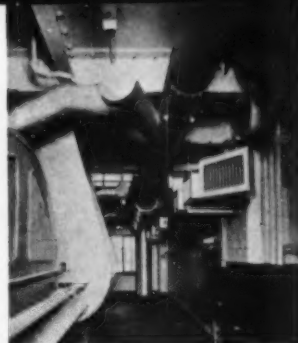
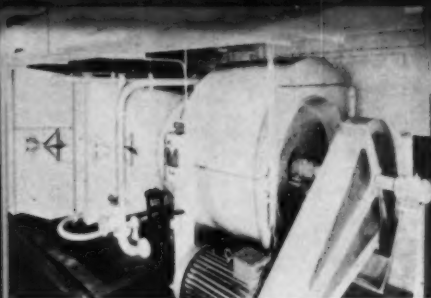
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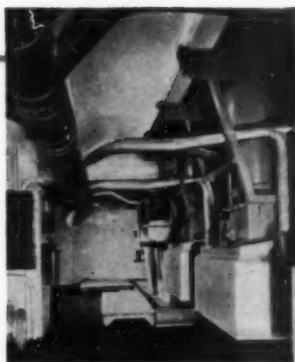
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Courtesy of Richard Crittall and Co. Ltd., London, and Tate and Lyle Ltd., Liverpool.



**MULTI-PURPOSE :** Detail views of the comprehensive installation at the Liverpool factory of Tate and Lyle, Ltd., where ventilation and heating are carried out by a plenum plant, supplemented by a special system to extract the fine sugar dust. Top left : Main fresh air fan, main filter and heater chamber. Centre : Dust exhaust fan with separator in background. Top right : Ducting for fresh air supply and exhaust. Bottom left : Hoods for dust extraction over automatic weighers.

radiators. Steam pressure for heating should be 5 lb. per square inch; where mains steam is at a higher pressure, it should be reduced to this level by reducing valves before it enters the heating circuit. Because of the high surface temperature of steam radiators (in the region of 220° F.) strong convection currents are formed and dust particles in the air are baked, causing the stuffiness often associated with steam heating. The warming-up period required for a steam heating system is less than that of a similar hot water system; but steam heating is less flexible because an even steam pressure must be maintained so that heat can be only "on" or "off," with no intermediate stage. Steam radiator systems are generally noisy, but are cheaper to install than hot water systems as the higher surface temperature of radiators and pipes allows them to be smaller in size.

### Plenum System

A heating system widely used for industrial buildings in the United States, and now becoming popular in this country, is the plenum system. It is particularly economical to install where large spaces need heating, and is simple

in operation and control. The system operates by means of warmed air, which is passed over a heating unit and circulated at a temperature of 110-120°F through ducts with outlets at intervals. For economic running, the air is usually re-circulated. Since no escape for the warmed air is provided apart from normal doors, windows, or ventilators, an air pressure or plenum is built up; this results in a very even heat distribution. Stuffiness tends to be caused by the high air temperature. The system can be used during warm weather, with the heating element cut out, to create air movement.

Factory ventilation varies from natural means such as windows and roof ventilators, or simple aids such as electrically-operated extract and intake fans, to elaborate air-conditioning systems. The choice will depend on the work carried out in the building, the amount of money available and the requirements of H.M. Inspector of Factories.

The Factories Act, 1937, contains provisions of a general nature only

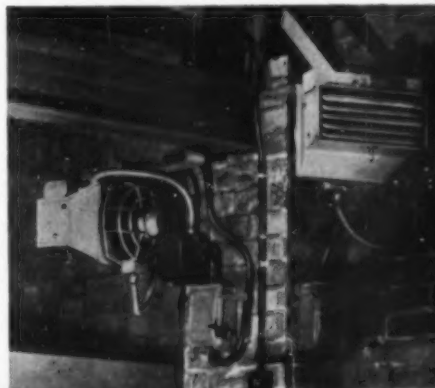
in relation to ventilation; these are designed to ensure adequate ventilation to all work-rooms. Detailed requirements relating to factories where there are fumes, dust, high temperatures or other conditions which may be injurious to the health of the workers are set out in various Regulations enforceable under powers conferred by the Act. Section 4 of the Act requires that effective provision shall be made for the proper ventilation of all working areas, and that all impurities in the air resulting from any industrial process shall be rendered harmless. The Act lays down no standards to assist in the design of ventilating equipment or plant, but for normal industries 1,500 cubic feet of air per person per hour (25 cubic feet per person per minute) and for trades designated as unhealthy 3,000 cubic feet of air per person, per hour (50 cubic feet per person per minute) can be regarded as reasonable.

### Air Distribution

Where simple ventilation is obtained by natural or mechanical means, the following points are of importance in the design of the installation: Even distribution of fresh air is essential and dead

UNIT HEATERS mounted back-to-back, showing both inlet and outlet sides

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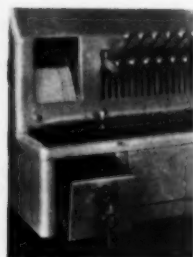


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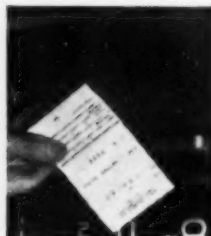
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spots where pockets of stale air can collect should be avoided. To prevent draughts, the speed of air movement at head level should not exceed 180 feet per minute for warm air and 150 feet per minute for cool air.

A simple mechanical or natural ventilation system draws fresh air into the building by means of ventilators or electric intake fans, circulates it round the building and forces the stale air out of the building. Air introduced in this manner may be warmed (as with a unit heater system or plenum system) or may be fully conditioned, as required, by cleaning, heating or cooling, humidifying or drying.

### **Purifying**

Many industrial processes today, particularly those connected with the manufacture of food, medical supplies and similar products, rely to a large extent on the purity of the air in which they are carried out for the high standard of purity required in the finished product. For such conditions, a high standard of air conditioning is essential to ensure that the air discharged into the working areas is freed from impurities (dust, outside fumes, bacteria, etc.) and to enable both the temperature and relative humidity to be closely controlled.

The simplest form of air conditioning unit consists of a filter to remove dust, a water spray washer which cleans the air and controls humidity, and a heater battery to regulate air temperature. A fan draws the air through the unit and circulates it by means of ducts throughout the building. The air thus circulated is normally drawn back into the plant to be reconditioned and recirculated.

### **Retaining Heat**

Air conditioning requirements vary very widely with different industries and each problem must be considered on its merits. This, again, is a matter best handled by a qualified engineer in consultation with the factory management and the architect.

However efficient a heating system may be, it can only be operated economically if the building it serves is properly insulated.

In all buildings, a proportion of the heat put into the air is lost through the structure; walls, roof and windows. The greater the reduction of this loss, the smaller the amount of heat required to maintain comfort conditions and, obviously, the smaller the amount of fuel required to operate the heating plant. It follows, therefore, that efficient structural insulation of a factory building results in a direct saving in fuel consumption.

The range of insulating materials readily available is extensive. As the initial extra cost of insulating any new factory building can be easily recovered in a few years by decreased fuel consumption, all new buildings should be designed with adequate thermal insulation. Existing buildings, too, should be treated to reduce heat losses to a reasonable level.

Other appreciable advantages, apart from the monetary ones already mentioned, resulting from thermal insulation include quicker warming-up and slower cooling-down of the building, a reduction in solar heat transmitted into the building during summer weather, and less danger of condensation owing to the high surface temperatures of walls and roofs in the building.

### **Insulating Materials**

The two principal ways of providing thermal insulation in a building are: (1) the provision of air spaces, and (2) the use of insulating materials.

An air space, if sealed, provides a good measure of insulation whatever materials are used to form it; but its value will be increased if insulating materials are used in the construction of the cavities. Such materials as lightweight concrete blocks, wood wool slabs and fibre boards can be used with different forms of construction. The air space provided should be at least  $\frac{1}{2}$  in. in width, but spaces wider than this show little advantage.

Insulating materials can be used in two principal ways: firstly, in place of materials with little insulation value—for example, lightweight concrete in place of normal ballast concrete for roof slabs, cellular concrete slabs in place of brick for inner linings of cavity walls, vermiculite plaster in place of ordinary hard plaster, or light

weight screeds in place of the normal cement-and-sand screed.

The second method is the use of insulating materials as a lining to the building. This is particularly applicable to existing buildings that require insulation treatment. Fibre board can be used as a lining to sheathed walls and roofs; wood-wool slabs and cork slabs are alternative linings. All these materials can also be used as permanent shuttering to reinforced concrete structures and form a good base for plaster.

Finally, a non-rigid insulating material such as glass silk, cork granules, slag wool or even sawdust forms an excellent insulating medium when used to fill cavities. This method is usually employed when existing buildings have to be insulated; but wherever possible the insulation should be incorporated as an integral part of the structure.

### **Glass Losses**

In modern factory buildings, the large areas of glass in roofs and side walls can be the source of considerable heat loss. This can be overcome either by the provision of double glazed windows (which are universal in the Scandinavian countries and on the continent) or by the use of special glass such as *Thermolux* which consists of two skins of glass with a layer of glass fibre between them. Hollow glass bricks, used instead of normal windows, will also reduce heat losses while maintaining a good level of daylight. These alternatives are all more expensive in first cost than ordinary windows, but can contribute in a large measure to fuel economies.

### **Official Guidance**

For the guidance of those interested in the problems of insulation in relation to different forms of construction for roofs and walls, the Ministry of Fuel and Power's Fuel Efficiency Bulletin No. 12 gives a comprehensive table of values of U (thermal transmittance) for typical constructions. This table also gives the amount of fuel used to make good the heat loss through 1,000 square feet of structure, and the actual fuel saving in tons per annum per 1,000 square feet due to insulation.

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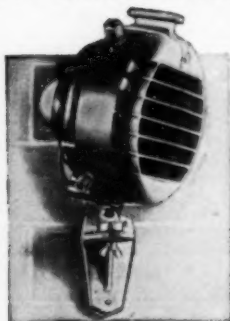
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## It Pays to Take Care of Your Equipment

By W. J. S. GRAHAM

Hundreds of pounds a year can be saved by the regular repair and maintenance of boots, overalls, gloves and other forms of protective clothing. In this, the last of his present series of articles, Mr. Graham writes about factories that have started their own mending and darning departments, repair shops and laundries.

variety of industries, including motor, metallurgical and chemical companies, now operate large laundries.

### Fabric Repairs

Another worthwhile proposition is a repair centre for company-owned fabric garments. Holes will show up after laundering, and if garments are passed to the centre for patching or darning at this stage their life will be greatly prolonged. The industrial type of electrically-operated sewing machine (with needle guards) or darning machine should be used in preference to the domestic machine. The darning machines will repair a hole or slit with great rapidity.

### Plastics

Plastic materials are more difficult to mend. In some cases, repairs can be effected by sewing with Terylene thread and then darning the seams; in others, by cementing a patch in much the same way that one repairs the inner tube of a bicycle tyre. Repairs can also be effected by a form of heat treatment.

Plastic gloves present a special problem, but the writer has devised a method which enables up to 30 holes to be repaired in an hour by one operator. In one works alone, over 25,000 repairs have been made by this method; and after testing with air pressure all of them were found satisfactory.

### Footwear

Where boots and clogs are owned in quantities, they are well worth repairing in the works. Here again speed is the important factor: if a man can leave a pair

**P**ROTECTIVE clothing has this in common with other forms of industrial equipment: it needs maintenance. Good maintenance will enable considerable reductions to be made in the welfare budget, especially if it is done by the company's own employees. The work involved will also provide a useful and productive occupation for employees who are confined, for one reason or another, to light duties. These are the main tasks involved:

### Identification

In nearly every case, it is important to be able to identify protective clothing items with specific persons. The most obvious method is to use marking ink, but various alternatives are available, including machine embroidery of the wearer's name and check number and metal tagging. For tagging, the familiar railway station machine is quite useful; about six strips, each bearing a check number, can be stamped out for a material and labour cost of 2d.

Departments can be identified by strips of colour or different-coloured garments. Some types of plastic glove are available with a choice of coloured gauntlets, and boiler suits or overalls can be obtained in many shades and contrasting collars.

### Laundering

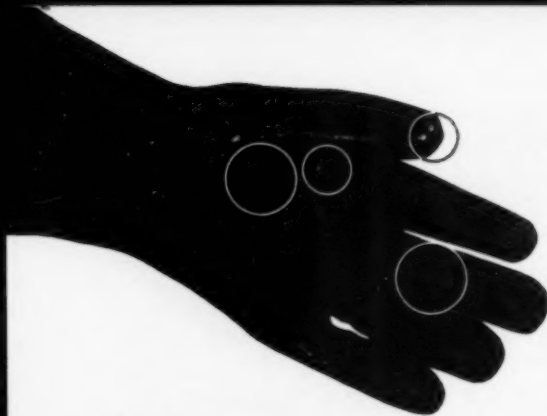
Where the washing bill is more than £500 a year, factories should install their own laundries. This enables garments to be washed and brought back into service very quickly indeed, thus reducing the number of sets required. (Most obvious department to benefit is the canteen.) Furthermore, losses are kept down because articles never leave the works.

If nylon is used, it will be found that laundry costs are reduced by as much as 60 per cent. compared with other materials because nylon does not require the same amount of time for hydro-extracting or drying. Calendering or ironing is normally unnecessary.

Very many works in a wide

Picture by courtesy of  
Northide, Ltd., of Queen St., Stockport





*For Welfare Equipment  
see B.I.F. Section  
commencing on page 91*

*Though damaged at four points (circled) this plastic glove has been mended and is now fit for service. In one works alone over 25,000 repairs have been made by this method*



*Among the organizations now operating their own works laundries is the Ford Motor Co., Ltd., of Dagenham*

of clogs at the repair shop as he goes to the canteen for lunch and pick them up re-ironed on his return, it is not necessary to lend him another pair until the first ones are ready. Boots or clogs left at the end of the shift can be repaired, or even rebuilt ready for reissue, before the next shift.

A synthetic soling material which has a longer life than leather is now available, but care should be taken to avoid a new slipping hazard. Rubber ankle-boots and wellingtons can be repaired by a cold vulcanizing process which is cheap and well within the capabilities of a small repair shop. Leather aprons (and sometimes gloves) can also be sent for repair to the footwear shop.

The basic equipment for all this work (it will be sufficient for two operators) should not cost more than £250. Various types of leather soles are available in cut sizes and it is now possible to

obtain a leather sole with very hard wearing qualities. The soles are dual-tanned, the hide first being subjected to a chroming process and afterwards tanned in the normal way by prolonged soaking in a vegetable extract. Leather soles treated in this manner have twice the resistance to oil and nearly four times the resis-

tance to water of normal vegetable-tanned leathers.

### **Eye Protection**

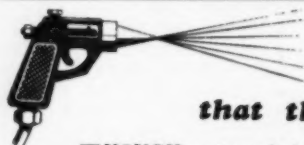
Certain types of plastic box-type goggles have renewable fronts: discoloured and scratched fronts can be replaced quite easily at one-third the cost of a complete goggle. Certain types of spectacles with plastic frames do not require taking to pieces when lenses need replacement. One supplier has designed his eye-pieces in such a way that either or both lenses can be replaced by undoing one large screw.

Spare side arms or fronts can be replaced quite simply, quickly and cheaply in the works and the cost is only a fraction of that charged for new spectacles. Cup goggles present no difficulty because spare plastic sides, lens and cover glasses will be supplied by the manufacturers.

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No inexperienced person should be allowed to carry out any repairs to breathing apparatus. Even canister charging should be reserved for experienced personnel, for this is one of the occasions when the whole set should be thoroughly examined.

The largest manufacturers of breathing apparatus in this country hold courses of one week's duration and trainees can be sent to other works for a thorough instruction in the correct use and maintenance of all types of masks used in industry. A nominal fee is charged for attendance.



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**THOUGH** compressed air equipment is an everyday feature of factory life, there is very little appreciation of the accidents that may result from wrong or frivolous applications of the compressed air line. A pressure strong enough to dust or clean is also sufficient to reach the skin and penetrate the body. A pressure of only 4lb. per square inch will rupture the bowel.

The dangers of using compressed air for dusting clothes, clearing swarf and dust from machines and general skylarking are, it seems, alarming—so alarming that a special pamphlet for workers' consumption has been prepared by the Industrial Safety Division of the Royal Society for the Prevention of Accidents.

The pamphlet is well written, clearly printed and pulls no punches. Grimly effective is the story of a worker who died as a result of a practical joke involving a compressed air hose. This should have a salutary effect on anyone with a tendency to mechanized horsplay.

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# These Three Canteens Were Designed to Boost Production

**F**EW are the canteen supervisors who have ever been given a definition of the function of their canteen. Few are the managements who could answer the simple question: "What is your canteen there for?"

This came out strongly during a recent interview, in which an applicant for the post of supervisor to a large canteen was questioned by a panel consisting of the works manager, welfare officer and chairman of the canteen committee.

"Of course," said the works manager, "your principal job will be to get them in and out fast enough to keep inside break times." "Well no," said the welfare officer. "That's important, but the first thing is to serve meals that really look after their health: balanced meals... enough calories and vitamins..."

"I don't agree with either," said the chairman of the canteen committee. "First things first: good hot appetising meals are the main responsibility of the canteen manager." Fortunately, no accountant was there to make the situation still more confused.

Actually all these instructions, though they seem to conflict, are one and the same. What they add up to is that the job of the canteen, first and last, is to help production.

The works manager had a good point when he talked of time. Having meals ready to time; serving them in the shortest possible space of time; having the work of the canteen staff so organised that the most is got out of their working time—all these are of the utmost importance.

The canteen cannot itself produce any part of the goods made by the factory, so it must help others in their work of production. Example: one canteen has opened nine tea kitchens in different parts of the factory. Now every one of the 10,000 operatives can be served with freshly made tea within two minutes of the bell. When trolleys were used they had to be wheeled long distances and were at the mercy of level crossings, lifts and rights of way. Sometimes there was delay, and sometimes long

walks had to be taken for replacements or forgotten items.

In planning and opening tea kitchens, this canteen helped production in a way that can easily be measured and assessed.

A second example comes from Scotland. Here the canteen manager has done miracles of planning to utilise every inch of space. This has enabled the kitchen and dining rooms to cope with the whole of the personnel in one sitting, instead of the three sittings formerly required. The works manager is

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**Canteen Equipment**  
*is in the B.I.F. Section  
commencing on page 91*

**Policy Column**  
*will be resumed in next  
month's issue*

---

convinced that this will be an enormous time saver.

Under the old arrangement, different groups of people were missing throughout a period lasting from 11.45 a.m. to 2 p.m. and work was subject to constant delays and interruptions. Under the new arrangement, all work stops for one hour—from 12.30 to 1.30 p.m.—and the maintenance men and cleaners have a clear field during that period.

Less spectacular but nonetheless interesting is the third example. This comes from a small factory near London where committee meetings feature largely in the work of the management. There is a work's council, a sub-committee for safety and another for training; also a weekly meeting for foremen and a planning group for directors and managers.

Until recently, these committees met at various times and in various places. Now most of them meet in the lunch break and

discuss their business over a "committee tray" sent in by the canteen.

It will be remembered that the welfare officer thought the main function of the canteen was to promote the health of the workers, and that he said this was more important than production. The truth is, of course, that production is finally dependent on the general good health of the working force.

A canteen that serves meals of sufficient quantity and reasonably supplied with meat, fish, fat, sugar, vegetables and fruit is doing a positive job towards keeping people at work and at the peak of production. Individual attention to the diets of convalescents, diabetics, gastric cases, etc., aids production by helping to keep skilled but handicapped people at their best.

The chairman of the canteen committee put first in his list of canteen priorities the provision of good meals. A good dinner or a hot and well-brewed cup of tea are of course important from the standpoint of enjoyment. But beyond subtle enjoyment, again, is the service to production. The good dinner attracts more workers into the canteen, and that means fewer workers fatigued by long journeys home, or protracted waits at cafes, or inadequate "bread and butter" meals. Lateness after lunch, too, bears a very close relation to the proportion of people who use the canteen.

To sum up: the good canteen serves the factory by planning its services to save operatives' time, and conserves operatives' health by providing the food they need. These are direct aids to production. Indirectly, a good canteen helps the industrial and commercial organization by giving staff and workers food they like in premises they find comfortable and attractive.

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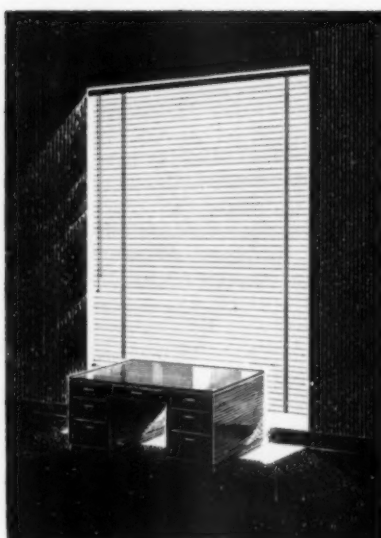
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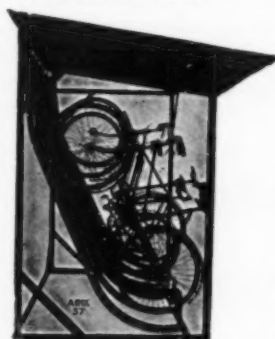
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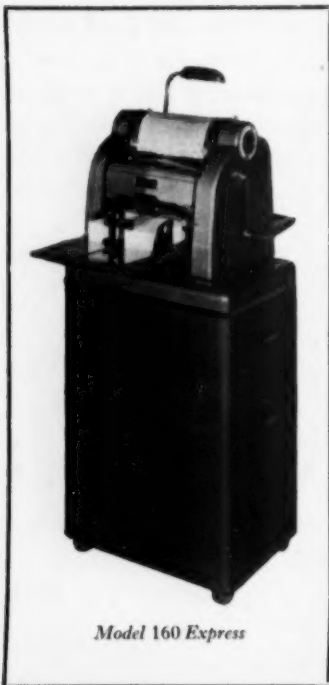
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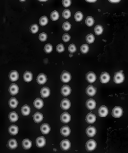
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- ADANA (PRINTING MACHINES), Ltd.**, 15-18, Church Street, Twickenham, Middlesex. Popesgrove 3655. **Stand J.19**
- ADDRESSALL MACHINE Co.**, 11-13 Southampton Row, W.C.1. Holborn 3571. **Stand J.3/13\***
- ADREMA, Ltd.**, 2-10, Telford Way, Acton, W.3. Shepherds Bush 2091. **Stand J.19**
- AJAX PRINTING MACHINES, Ltd.**, 194-200, Bishopsgate, E.C.2. Bishopsgate 3748. **Stand J.17**
- AUTOFEELS LONDON, Ltd.**, 367a, King's Road, S.W.10. Sloane 7732. **Stand G.55**
- BEANSTALK SHELVING CO.**, 45, South Street, Chichester, Sussex. Chichester 4059. **Stand J.6**
- BRITISH EAST LIGHT, Ltd.**, 32, Broadway, Barking, Essex. Rippleway 2647. **Stand O.40**
- BRITISH TYPEWRITERS, Ltd.**, Queen St., W. Bromwich, W. Bromwich 0781. **Stand O.72**
- F. C. BROWN, Queen's Road, Bisle, Surrey. Brookwood 3131. Stand J.32**
- BURROUGHS ADDING MACHINE, Ltd.**, 356-366, Oxford Street, W.1. Regent 7061. **Stand J.22 and J.3/13\***
- CARSON BROS. PRODUCTIONS, 4, Charlotte Street, E.C.2. Shoreditch 4025. Stand J.3/13\***
- CARTER PARRATT, Ltd.**, Idlesleigh House, Caxton St., S.W.1. Abbey 3675. **Stand J.3/13\***
- CHUBB & SON'S LOCK & SAFE CO., Ltd.**, 40-42, Oxford Street, W.1. Museum 5822. **Stand B.525 (Castle Bromwich)**
- COLUMBIA RIBBON & CARBON MFG. Co., Ltd.**, Kangley Bridge Road, Lower Sydenham, S.E.26. Sydenham 5193. **Stand J.3/13\***
- CONSTRUCTORS, Ltd.**, Nickel Works, Tyburn Rd., Ealing, W.5. Ealing 1616. **Stand O.401/300 (Castle Bromwich)**
- COX & Co. (WATFORD), Ltd.**, Watford By-Pass, Watford, Herts. Watford 5631. **Stand J.11**
- JOHN DICKINSON & Co., Ltd.**, 30-38, New Bridge Street, E.C.4. City 5775. **Stand O.26/33**
- ELLAMS DUPLICATOR Co., Ltd.**, 5, Dean Street, W.1. Gerrard 4556. **Stand J.3/13\***
- EVERTAUT, Ltd.**, Walsall Road, Perry Barr, Birmingham 22B. Birchfields 4587. **Stand J.3/13\* and B.509/408 (Castle Bromwich)**
- FINNEY, SMILEY & Co., Ltd.**, 217a, Kensington High St., W.8. Western 4081. **Stand J.33**
- FONADEK (BRANSON), Ltd.**, Vivian Road, Harborne, Birmingham 17. Harborne 2267. **Stand J.9**
- GESTETNER, Ltd.**, Aldwych House, Aldwych, W.C.2. Holborn 8700. **Stand J.3/13\***
- H. E. GIBBS, Ltd.**, First Avenue, Montague Road, N.18. Tottenham 5111. **Stand J.4**
- J. GLOVER & SONS, Ltd.**, Groton Road, S.W.18. Battersea 6511. **Stand B.714 (C/le Bromwich)**
- HADLEY SOUND EQUIPMENTS, Ltd.**, 72, Cape Hill, Smethwick, Staffs. Smethwick 0977. **Stand J.16**
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- FRANK WILSON & Co.**, Cross Street, Southport, Lancs. Southport 2133. **Stand J.31**
- SAMUEL WITHERS & Co., Ltd.**, Park Works, Barton Street, W. Bromwich, Staffs. W. Bromwich 0122. **Stand J.36**

\*Office Appliance and Business Equipment Trades Association Composite Stand.

## OFFICE EQUIPMENT

Firms marked ★ are exhibiting on the composite stand (J3/13) of the Office Appliance and Business Equipment Trades Association

ACROW (ENGINEERS), Ltd., **Stand A.17**

STEEL partitioning has recently been added to the range of products manufactured by this firm. It is claimed that the partitioning incorporates features of design and construction which are not found in any similar product.

Roistore mobile storage equipment, which saves much valuable space in stores, and a wide range of tubular steel furniture for offices, canteens, workshops, assembly halls, etc., are other products of the company.

ADDRESSALL MACHINE CO.

**Stand J.3/13★**

EXAMPLES from the well-known range of Addressall addressing and listing machines

will be shown. Addressall have hand, power and treadle operated machines to cover every addressing and sheet listing requirement.

ADREMA, Ltd.

**Stand J.19**

NEW developments on this stand include the redesigning of the EMB electric embossing machine and the introduction of a new colour scheme for all the firm's addressing machines. Previously the equipment has been black but from now on it will be finished in hammer-line grey.

Improvements incorporated in the embossing machine have given it a more modern appearance and made it easier to operate. The embossing drum has been enclosed in a moulded case and the dial of



**Redesigned embosser**

the machine is now lighted from within. The light is reflected on to the type characters from a mirrored glass back.

A full range of hand and power operated addressing machines will also be on show and examples of Bradma systems for various operations will be demonstrated.

**AJAX PRINTING MACHINES, Ltd.** Stand J.17

**I**N its range of hand-operated printing machines, this firm will be displaying its latest product, the Master high speed press. Like the other machines in the range, this press needs very little skill to operate; previous experience is not necessary. As many as 2,000 impressions per hour are obtainable.

**AUTOFEDS LONDON, Ltd.** Stand G.55

**A**UTOMATIC suction feed devices for addressing machines and office printing machines and a roll feed and guillotine for addressing machines will be shown by this firm. It is appropriate, therefore, that their stand should be adjacent to the office equipment section at Olympia. Both the roll feed and suction units can save much time and effort in preparing documents in the office.

**BEANSTALK SHELVEING, Ltd.** Stand J.6

**T**HE conception of the Beanstalk is essentially quite simple. It consists of a series of wire trays which can be built into racks and tiers with the aid of supporting pieces. The trays are available in sizes from 6 in. to 9 ft. in length. They can rest on the floor, on the desk or can be suspended from the wall and an extra tray can be added any time it is needed. The device finds many applications in

every department of the office, factory, canteen, stores, etc.

**BRITISH TYPEWRITERS, Ltd.** Stand O.72

**O**VER 500,000 models of the Empire Aristocrat portable typewriter have already been sold. This year a new development will be shown for the first time. This is an Aristocrat fitted with the Elite style of type. The machine is very small—it stands no higher than a box of matches—yet it embodies a standard four-bank keyboard and most of the features of the office machine. An all-steel carrying case is normally provided, but a range of alternative cases will be shown.

**BURROUGHS ADDING MACHINE, Ltd.** Stand J.22 and J.3/13★

**M**AKING a first appearance at the B.I.F. will be the Burroughs range of adding, subtracting, duplex adding and desk book-keeping machines. This range is claimed to cover all business requirements. Also on view will be a selection of their calculators, including simplex and duplex hand and electric models.

GB-Bell and Howell microfilming equipment, which is sold and serviced exclusively by Burroughs, will also be demonstrated. This equipment has considerable advantages in the fields of paper saving, space saving and security.

A selection of machines will also be seen in the Burroughs section of the O.A.B.E.T.A. composite stand.

**CARSON BROS. PRODUCTIONS** Stand J.3/13★

**S**EVERAL new products will be introduced by this firm. These include a new executive desk and a modern bookcase cupboard. The Statrol stationery trolley will also be exhibited and this has five two-way sliding trays with adjustable divisions for quarto and foolscap files and papers.

**CARTER-PARRATT, Ltd.** Stand J.3/13★

**T**HE E type flat visible-card index cabinet and an example of Vistem vertical visible card index equipment will form the Carter-Parratt exhibition on the O.A.B.E.T.A. stand.

**COLUMBIA RIBBON AND CARBON MFG. CO., Ltd.** Stand J.3/13★

**T**HE space allocated to this firm will be taken up with examples of their ink, ribbons, carbon papers and hectographic duplication systems.

★ O.A.B.E.T.A. Composite Stand J.3/13

**CONSTRUCTORS, Ltd.** Stand D.401/300 (Castle Bromwich)

**M**ETAL furniture and storage equipment for the office and the factory are the chief products of this organization. An installation of steel partitioning will be shown which can be rearranged to suit changing requirements with maximum speed. Many extras can be provided with this equipment, including internal heating in the panel sections, sliding service hatches for communication, swing doors, etc.

**JOHN DICKINSON & Co., Ltd.** Stand O.26/33

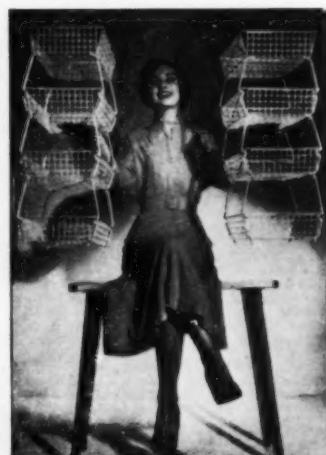
**A**LTHOUGH office equipment and supplies form only a small percentage of this company's products, they nevertheless represent a considerable number of lines. In fact, they range from thong loose-leaf ledgers to continuous stationery, and from gummed labels to self-sealing pay packets and envelopes. In between are binders and files of all descriptions, card index supplies, account books, duplicate and triplicate books.

**ELLAMS DUPLICATOR CO., Ltd.** Stand J.3/13★

**T**HREE machines are to be exhibited, one being the M100E electric model; the other two will be the D100 and D10 hand operated models. All these work on the rotary principle and are designed for effortless and efficient operation.

**EVERTAUT, Ltd.** Stands D.509/408 (C'te Bromwich), J.3/13★

**S**TEEL occupational seating ranging from an executive's



**Beanstalk shelving is versatile**



# AND NOW ... COLUMBIA

*Continuous*

**Ready Master** REGD.

Because a Ready Master reproduces, on any type of hectograph duplicator, not only the typed matter, *but also all pre-printed data, rulings etc.*, it avoids any possibility of error . . . any danger of bad register. And now we introduce *Continuous Ready Master* . . . essential wherever continuous stationery is used and clear, accurate copies are required. No loose carbon sheets . . . no printed copy forms!

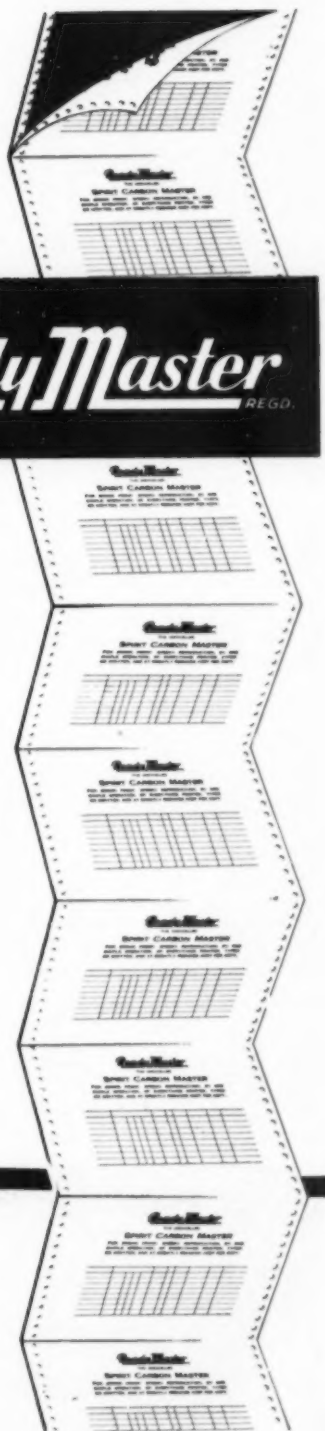
Made for TABULATING MACHINES—  
ADDRESSING MACHINES—BILLING MACHINES—  
TELEPRINTERS AND TYPEWRITERS

*Write or phone for full particulars.*

## COLUMBIA RIBBON & CARBON MANUFACTURING CO., LTD.

**Systems Division**

Astoria House, 62 Shaftesbury Avenue, London, W.1.  
Telephone: GERRard 1373-5





chair to models designed for the factory will be exhibited by Evertaut. They will also show works and office cupboards and lockers, library shelving, a work tray storage system, stacking chairs, plan filing cabinets and office tables. This firm are also showing on the O.A.B.E.T.A. composite stand at Olympia.

**FONADEK (BRANSON), Ltd. Stand J.9**

**T**HE use of a Fonadek telephone amplifying device leaves the hands free to write, to handle documents, etc., and makes it much easier to converse clearly with people on the telephone. Other advantages are that several people can, if necessary, hear what is being said and can reply. A model is available with an external loudspeaker for use in noisy situations.

**GESTETNER, Ltd. Stand J.3/13★**

**T**HIS year, Gestetner will be showing examples from their world famous range of duplicators and equipment. Two of the 160 models will be working on the special stand at Olympia to produce the official overseas daily list of visitors on behalf of the Board of Trade.

**J. GLOVER & SONS, Ltd. Stand B.714 (Castle Bromwich)**

**T**HE well-known Stormor mobile storage equipment will be the main feature of this display. This method of storage, which consists of a number of racks free to move along rails on ball-bearing castors, is claimed to make substantial savings in space. Units are rolled out of the way to give access to those behind, eliminating the need for gangways.

**HADLEY SOUND EQUIPMENTS, Ltd. Stand J.16**

**A** NEW type of personal inter-communication system will be introduced at Olympia by this company. The system is designed particularly for linking a business head and his chief executives and



**New Hadley master station**

the master unit can be coupled with either six or twelve extensions. Calling from the master set to one or more extensions is automatic when the appropriate key is depressed; there is no separate calling key. Although all the extensions can be called together for staff location purposes, the privacy of each one is preserved and an engaged signal informs an extension when the master unit is in use.

**HARTLEY ELECTROMOTIVES, Ltd. Stand J.25**

**T**HE Tape - Riter dictating machine uses standard  $\frac{1}{4}$ -in. tape as its recording medium. The tape is fitted into a detachable "cartridge" which eliminates the need for threading it into the machine. Each cartridge gives half an hour's recording and can be fitted or removed in a matter of seconds. There are only two controls; one for volume and a gear lever with "select," "record," "listen," "rewind" and "fast forward" positions. Various accessories are available which make transcription simple and give the machine flexibility in operation.

**G. A. HARVEY & CO. (LONDON), Ltd. Stand J.31**

**T**HE range of equipment shown by this firm is claimed to cover all modern methods of filing and storekeeping. Steel office furniture will also be included, and the outstanding unit will be a new type of double pedestal executive desk. The desk is designed to give a 29 in. working height, but the plinths are adjustable to a maximum height of 30  $\frac{1}{2}$  in.

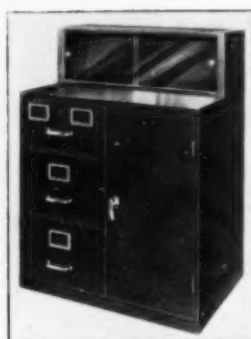
An improved range of vertical filing cabinets, plan cabinets, card index cabinets, cupboards, lockers, wastepaper tubs and other office accessories will complete the display. All this equipment is manufactured in steel.

**JAMES HOWDEN & Co., Ltd. Stand J.8**

**L**ATEST product of this manufacturer of metal office furniture is the model OA.10. This is a composite space-saving unit particularly useful in small offices. It consists of a single door cabinet fitted with a lock and one adjustable shelf; a three-drawer filing cabinet and a display or bookcase unit fitted with glass sliding panels.

Other metal filing cabinets, desks, tables and a number of attractive new industrial storage units will also be featured on the Howden stand.

★O.A.B.E.T.A. Composite Stand J.3/13



**Composite cabinet for saving space**

**J. J. HUBER, Ltd. Stand J.35**

**T**HIS firm makes materials and apparatus for producing plates photographically for use on small offset printing machines. Usually the plates are of non-oxidizing aluminium, but the new Hubimat paper plate will make its debut at the exhibition. It is suitable for short runs on office-type offset duplicators.

Included in the new range of plate-making equipment on show will be the Hubex vertical camera.

**KAYE'S ROTAPRINT AGENCY, Ltd. Stand J.35**

**A**T Olympia Kaye's will be introducing an offset litho printing machine which is new to the Rotaprint range. The outstanding feature of this new model R30/90 is the press button control. This takes the form of a specially-designed panel on the operating side of the machine. This facility reduces operation to a very simple routine.

It is claimed of the machine that there is scarcely any form of print matter used in the everyday run of



**Press to print**

"BEFORE THE PROCESSION

COMES ALONG —

TAKE A LOOK AT  
OUR NEW OFFICES.

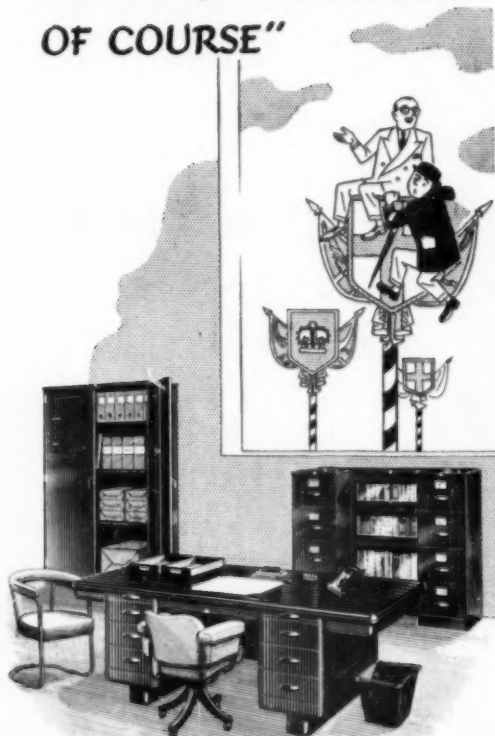
ALL THE

**FURNITURE**

**IS STEEL—BY**

**Sankey-Sheldon**

**OF COURSE"**



SANKEY-SHELDON LIMITED, 46, Cannon Street, London, E.C.4

## PERSONNEL ARE PEOPLE!

### How to Keep Their Individual Characteristics Well in View

No. 2469523 may be only a soldier to the War Office. But his C.O. knows him as a "person".

If you have a large number of people on your staff, how do you know them as "people"?

There's a simple way you probably haven't heard of (because it's new). That is with Shannolink.

Shannolink is a suspended file. But instead of a "tab" there's a full-width, full-vision strip going right across the file.

And on this strip there is a ready printed code of numbers (1-12 and/or 1-31) for progressing dates and other confidential items of information.

Now . . . all the details of the person concerned are inside the file. There's his original application, correspondence, references, etc. But on the full-vision strip are the salient facts—signalled so as to tell you quickly what you want to know—*without* delving into the file.

At a glance you can see, name, address, age, whether married, family, grade of health, department, pay, whether fit for promotion, educational background, etc., etc. A card slotted in the front of the file tells you a lot more . . . his years of service, absences, increases, training courses, National service, etc., etc.

Now, here is a simple question; since you have to keep some sort of file for employees why not make it do a real job of work? In short, why not have the benefits of Shannolink? You can use your own cabinets. All you need are the new Shannolink files.

Let us tell you more about them. Just jot "Shannolink for Personnel" on your letterheading and full details will be sent you by return.

**Shannon Systems**

**FIRST IN FILING**

The Shannon Ltd.

93 Shannon Corner - New Malden - Surrey

business which cannot be produced on it.

Other smaller machines in the range which use both paper and aluminium plates for reproducing matter will be seen working on this stand.

**LEABANK CHAIRS, Ltd.**  
Stand D.616/716 (Castle Bromwich)

**T**WO new chairs for the office and one for the factory will be introduced by this company. These are a new executive model, a typist's chair and a strongly-



Comfort for the executive

constructed tip-up seat with an automatic spring action. The tip-up seat is designed for fixing to a wall or bench, has a strong metal frame and bracket and a washable wood seat.

The executive armchair has been designated type K700 and has a clean design which is free from projections. The frame is constructed of steel and alloy castings and the seat, back and arm rests are cushioned with foam rubber and attractively upholstered in cord, hide or leather cloth.

**THE LETTER-FILING APPLIANCES Co., Ltd.**  
Stand J.7

**T**HE products to be displayed by this firm will consist of manilla flat files in several styles for general filing purposes, box files and lever arch files.

Other items will include loose leaf binders, catalogue covers, guide cards, card index and stationery cabinets, transfer cases and Kliptorail suspension filing equipment.

**THE MAGNETA TIME Co., Ltd.**  
Stand J.15

**T**IME recorders, communication systems, public address systems and synchronous clock systems will all be shown by this firm.

★ O.A.B.E.T.A. Composite Stand J.3/13

Latest in the range of time recorders is the model M16 which is fully automatic and can be operated with only one hand.

The public address systems can be applied in shops, factories and warehouses for staff location, communication, fire alarms, etc. Time signals can be superimposed over the loudspeakers automatically by a programme instrument if required.

**E. N. MASON & SONS, Ltd.** Stand J.14

**T**HE firm will be displaying a new range of wood office furniture which is intended to cover all office requirements. For the drawing office they will be displaying two new items—a vertical plan filing cabinet and a horizontal plan filing cabinet.

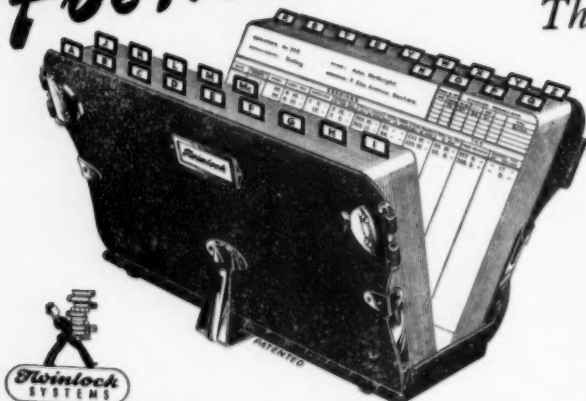
In the photo-copying field they are showing a combined developing and drying unit for handling die-line prints. For the firm that requires high quality printing with a medium output there will be a small photo-copying machine which has fluorescent tubes as its light source.

**MILNERS SAFE CO., Ltd.** Stand J.3/13★

**T**HE B series of fire, fall and heat-resisting safes and the Mersey filing cabinet form Milners' exhibit. The cabinet incorporates

# For Mechanised Accounting

## The POST Master



### POSTING TRAY

- ★ In four sizes for cards 12", 14", 16" and 18" wide
- ★ Short Depth ; 500 Card Capacity
- ★ Wide Posting 'V'
- ★ Durable Construction

Descriptive Folder Available on Request

# Twinlock MACHINE ACCOUNTING EQUIPMENT

REGISTERED TRADE MARK

Supplies obtainable through the Printing, Stationery and Office Equipment Trades only

**PERCY JONES (Twinlock) LTD.** 37, CHANCERY LANE, W.C.2. Telephone: CHAncery 8971  
Branches: MANCHESTER, GLASGOW, LEEDS Factories: BECKENHAM, KENT.



*The* **WORLD BUYS**  
**BISLEY**  
*the* **BETTER**  
**STEEL** *office* **EQUIPMENT**

 **TRADE MARK**

F. C. BROWN.

BISLEY SURREY.

B. I. F. STAND NO J. 32. EMPIRE HALL OLYMPIA.

## CARTONS DISPLAY BOXES

AMHERST



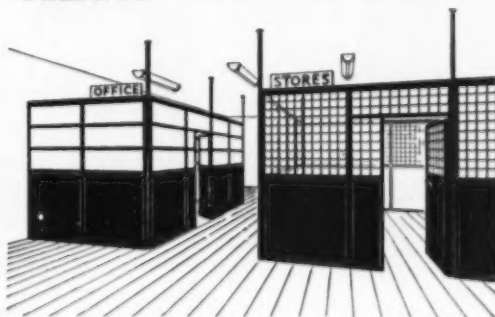
3261/4

ESTABLISHED 1888

*Experience  
Counts !*

BRITANNIA FOLDING BOX CO. LTD.  
 DACE ROAD, OLD FORD, LONDON

## ABIX STEEL PARTITIONS



Abix steel partitions are light, strong and fire resisting.

Suitable for office or factory, they can be erected by comparatively unskilled labour.

Catalogue on request.

A product of the manufacturers of the popular Abix cycle stands.

## ABIX (METAL INDUSTRIES) LTD

FACTORY EQUIPMENT SPECIALISTS

TAYBRIDGE WORKS, TAYBRIDGE ROAD, BATTERSEA, S.W.11.  
 Phone: BATTERSEA 8666/7. Grams: Abix, Bact. London.



## EQUIPMENT SURVEY SECTION

a convex edge design and it is now available in four, three and two-drawer foolscap sizes and a four-drawer quarto size. All drawers run on Milners' new roller bearing anti-friction suspension slides.

**MODERN TELEPHONES (G.B.), Ltd.**  
Stand J.37

**W**ITH this firm's Telesound system of intercommunication, it is possible for an executive to speak to all the people in a room and for any one of these to answer back by way of the loudspeaker. The system is linked with the internal telephone system so that private calls may also be made.

Another product is the Minor instrument, ideal for smaller premises, for communicating between four and six points.

**MOORE'S MODERN METHODS, Ltd.**  
Stand J.20

**S**PECIALY featured on this stand will be the Totax combined P.A.Y.E. and wages system. The full entries for wages and all income tax details are recorded on one sheet, thus dispensing with a detailed tax card. An ingenious arrangement of slotted columns for total gross pay and total tax due to date avoids referring back to previous weeks' entries. Sheets

can be designed to suit any individual business.

A comprehensive range of systems equipment including accounting and record-keeping equipment, loose leaf binders and ledgers, visible records, strip indexes, etc., and a selection of loose leaf covers will make up the rest of the display.

**NATIONAL CASH REGISTER Co., Ltd.**  
Stand J.12 and J.3/13★

**L**ONG known for their cash registers, accounting and adding machines, this firm enters a new field at this year's B.I.F. with the Cash Sorter. This device simplifies and accelerates the handling of cash and can sort coins worth £100 in a few minutes. It is made of a black plastic-type substance strongly reinforced with wire supports. It is built in five sections topped by a hopper and the coins are poured through the hopper into four sorting trays underneath.

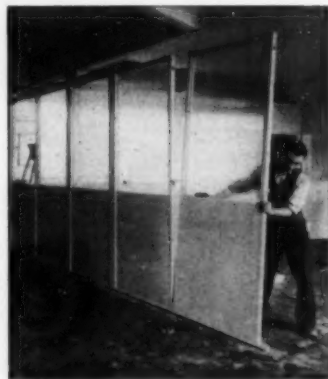
Another new product to be shown is the new 15-line version of the National credit sanction system. This equipment provides for press-button remote control sanctioning of sales bills and similar documents in a matter of seconds.

The company's range of cash

registers and the E-N series of adding machines will also be displayed. This company's products will also be seen on the O.A.B.E.T.A. composite stand.

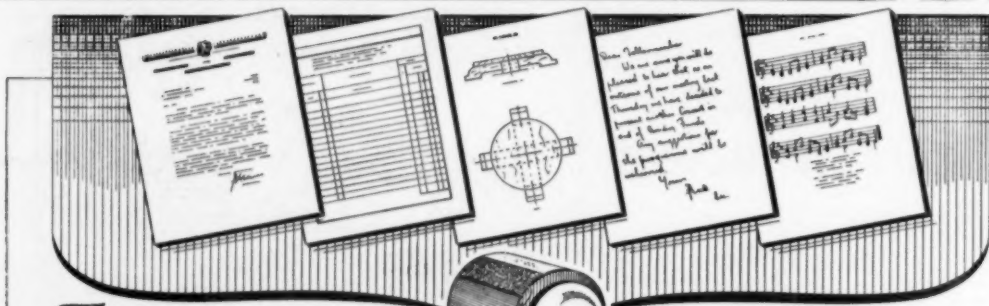
**NORWOOD STEEL EQUIPMENT (LONDON), Ltd.**  
Stand J.28/34

**I**N designing their range of filing cabinets, cupboards, lockers, shelves, storage bins and partitioning, this firm has given particular attention to ensuring that each article can be easily broken down



Easily assembled partitioning

★ O.A.B.E.T.A. Composite Stand J.3/13



For the reproduction  
of anything  
that can be written

drawn or typed,  
you need an

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years with the  
automatic copy -  
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\*patented throughout the World



# Meet CECILIA FLUTE

LIKE EVERY CONSCIENTIOUS HOUSEWIFE, Cecilia Flute needs a tough resilient envelope\* for negotiating with the tradesmen.

Ladies as yet unmarried may think it a simple enough matter to stick a note in the milk-bottle saying, "One pint extra till Monday, Willie's

half-term," or, "Put in wood shed, blue tits very active." This is not so, as they will find once they have tried sending these messages

on old electioneering leaflets, first demands for the Rates, or other materials which, lacking the required spring-back to lodge firmly in the bottle neck, take endless precious minutes to fish out again with a pickle-fork.

Cecilia Flute has all such situations in hand. Flimsy directions to baby-sitters may blow, unread, from the mantelpiece into the fire in other people's houses, and result in the baked custard staying in the oven and undergoing a terrible transformation, but not in Mrs. Flute's. Nor has she more than once made the mistake of using inferior quality paper for a note which, pinned to the door and saying, "Sweep, come right in and start," became carried

by a light breeze into the next garden but one, and there gave rise to a most unfortunate misunderstanding.

Mrs. Flute knows that in correspondence of this kind stationery must be beyond reproach. That is why, like every conscientious housewife, she needs a tough, resilient envelope for negotiating with the tradesmen.

\* One of the RIVER SERIES for preference. A strong, square-cut Amazon Manilla should be an absolute cinch for Cecilia, our fictitious housewife.



There are several features that distinguish River Series from ordinary envelopes—their smart modern "Square Cut" appearance—all have generous gumming of flaps and wide overlap of seams to provide security—and all are made from British high-quality papers. Your local Stationer or Printer will readily arrange supplies.

## River Series envelopes

THERE ARE OVER 260 different sizes and shapes of Manilla, Cream Laid, Air Mail, Cartridge and Parchment envelopes in the 'River Series' range.



★ **FREE SAMPLE BINDER**

We shall be delighted to send to professional and business houses our newest sample binder of River Series envelopes. It will prove most helpful in deciding the best for every separate envelope requirement.

NAME \_\_\_\_\_  
FIRM \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
B.2. \_\_\_\_\_

PIRIE, APPLETON & CO LTD · CHADWELL HEATH MILL · ESSEX

MAY, 1953

99

for export packing. Several display stands will illustrate products as finished articles, then exploded into parts and, finally packed in export cases.

A prototype double pedestal office desk will also be on view.

**PIRIE APPLETON & Co., Ltd. Stand O.45**

**I**N the River series of envelopes manufactured by this company, there are no fewer than 260 different types. The manufacturers claim that theirs is the only range of envelopes manufactured in this country as a complete series.

Apart from envelopes, an extensive range of commercial stationery will be displayed.

**REES PITCHFORD & Co., Ltd. Stand O.57**

**T**HIS company's trade-mark, Velos, is well-known on staplers, pencil sharpeners and many other office accessories. This year they will be introducing a new pencil sharpener known as the Crown and improvements have been incorporated in several existing lines.

**REMINGTON RAND, Ltd. Stand J.5**

**S**EEN here will be the KMC standard typewriter which is now made entirely at the Reming-

ton plant in Scotland. Some of the outstanding features of this machine are the keyboard margin control by which the margins are set from the keyboard itself, the key trip lever which allows jammed type-bars to be freed from the keyboard, and the new style green plastic finger-fitted keys. These eliminate glare and reflection, so alleviating fatigue and eye strain.

Another machine on display will be a portable which provides the main features of the office model plus compactness and light weight.

Office supplies, including typewriter ribbons and carbon papers, will constitute the remainder of the display.

**REXEL, Ltd. Stand O.24**

**A**T least three of the products on this stand will be exhibited for the first time. One of these is the Cometta, a chromium-plated streamlined stapler with a new type of front loading device which gives an extra large capacity of 210 staples.

Another is the Meteor which can pin, staple or tack and can also be used as a plier stapler. This, too, a modern design and an attractive finish and weighs 5½ oz.

Existing products in the Rexel range of numbering machines,



**The Meteor will pin, staple or tack**

daters, punchers, etc., will be on view as well as Speedfix self-adhesive tapes and dispensers.

**SHERIDAN SERVICE Co., Ltd. Stand G.41**

**A**UTOMATIC string-tying machines can save a great deal of time and trouble in packaging departments. Two machines for this kind of work will be shown at the Fair. The manual cross-tyer makes single, double and cross ties, without any adjustments, on packages up to 16 in. by 9 in. and on intermediate sizes.

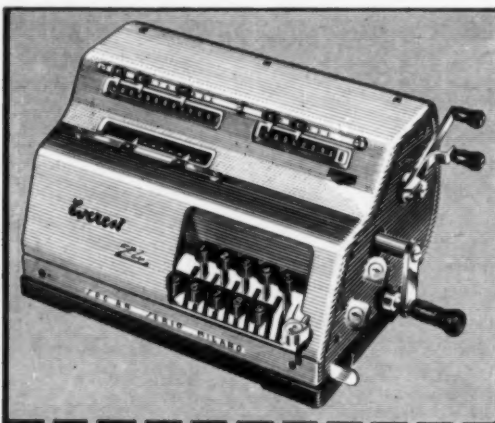
The second machine is the set-up box tyer primarily intended for stacks of rigid boxes.

**SOMMERFELDS, Ltd. Stand J.30**

**F**OCAL point of the Sommerfeld exhibit will be their new type of suspension drawer incorporated

# **a good accountant deserves an Everest calculator . . . .**

- ★ Key setting with proof dials
- ★ Single hand operation
- ★ Automatic dividend tabulator and division alignment
- ★ Reverse switch for negative division
- ★ Tens transmission throughout
- ★ Capacity 9 × 8 × 13



For full details or demonstration write or phone

**T.S. (OFFICE EQUIPMENT) LTD.**  
31 NEW BRIDGE ST., LONDON, E.C.4  
Tel: C1Ty 1107

- ★ Sole distributors for Everest Calculators and Typewriters
- ★ Sales and service throughout the country

The chairman has the conference absolutely taped

on a

## TAPE-RITER

the world's finest dictating  
and recording machine



It takes the paper out of 'paper-work' too.

The TAPE-RITER is a dictating machine with a Voice-perfect reproduction from the magnetic tape makes it ideal for the recording of interviews and conferences where it is important to capture not only the words but the tone of voice and emphasis with which they are spoken. The Tape-Riter gives you a complete record of the proceedings, which can be stored indefinitely, transcribed immediately or played back whenever you want.

When dealing with correspondence and normal office routine, you can dictate for as long as you please without stopping the machine, and the Single Lever Control enables you to erase and correct as you go along. The Tape-Riter is simplicity itself to operate, light and easily portable, and the same machine is used both for transcribing and dictating.

The Tape-Riter is invaluable to the busy executive to whom time is money. There is no other machine like it at the price. It will give you years of swift, sure and outstandingly efficient service.

### HARTLEY ELECTROMOTIVES LIMITED

There are Sales and Service facilities for the Tape-Riter in most large towns in this country and overseas. For further details please write to:

HARTLEY ELECTROMOTIVES LTD., 1A, HARRINGTON ROAD, LONDON, S.W.7. TELEPHONE: KNIGHTSBRIDGE 2511



## EQUIPMENT SURVEY SECTION

in their filing cabinets. They claim that this new form of suspension is exceptionally smooth-running and inexpensive.

Apart from steel filing cabinets (including designs manufactured especially for export) they will display steel clothes lockers and other office equipment.

**THE TRADE LOOSE LEAF Co., Ltd.**  
Stand O.3

**U**NDER the trade marks Guidex and Merlin, this firm produce a range of loose-leaf books, card indexes and suspension filing equipment. In this range is included a useful binder which transforms untidy files of delivery notes, copy invoices, orders and the like into tidy uniform volumes. The device is bound in stout boards, has a cloth hinge reinforced by a manilla flap which is gummed in position round the spine and can be used for titling purposes.

**UNIVERSAL CASH REGISTERS Co.**  
(1951), Ltd. Stand J.41.

**C**LAIMED to be the first wholly British cash register of its type is the Accountant Class machine which will be displayed on this stand for the first time. Features of the new machine

enable it to print all totals and to produce records of these totals for as many purposes as may be required—filing, bank paying-in slips and check figures, etc.

Of special interest to multiple users is the "accountant's cash drawer total" which forces the branch shop manager to declare the amount of money in the drawer before he can read his total. If the register is not adding correctly, the fact is thus made immediately obvious.

Other cash registers for different applications will also be on show.

**UNIVERSAL POSTAL FRANKERS, Ltd.**  
Stand J.26

**T**HIS year's B.I.F. will be the first occasion on which the Totometer counting and printing machine has been exhibited. The machine is designed for counting a wide range of material including bank notes, cheques, postal orders, labels, tickets, bills, etc. If required, it can be arranged to make an imprint on each sheet as it counts. Speeds of up to 55,000 an hour can be achieved.

Automatic postal franking machines for either the large or the small firm will also be exhibited. The Simplex model which, it is claimed, can be justified by a mail of fewer than 20 letters a

day, can print any denomination of postage from 4d. to 64d. in one impression. The machine will also print a slogan or a "return if undelivered" address.

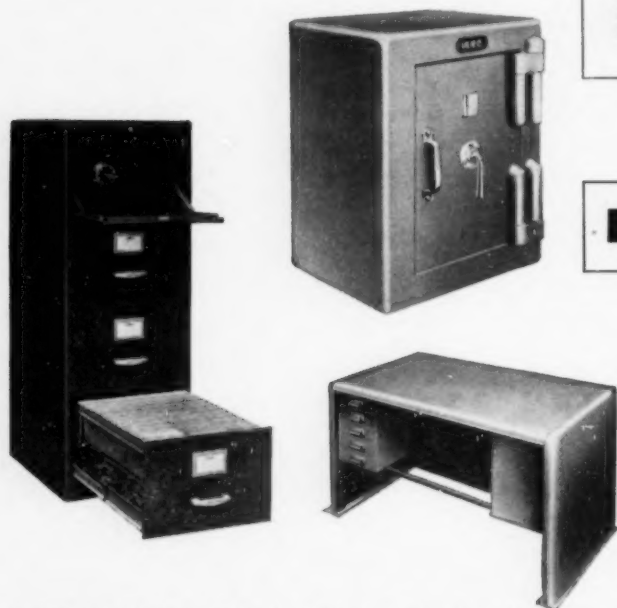
**FRANK WILSON & Co.** Stand J.21

**B**ASIS of this firm's display will be the Railex filing system. With this system, a space saving of 50 per cent. is claimed over conventional suspended filing systems. Each folder is suspended sideways from a rail, with a title tab fixed to the front edge at an easily visible angle. The rails are fitted in tiers to the shelving or cabinets and a number of different style housings will be shown in both wood and metal.

Other exhibits include self binding, double top, lever arch, and box files, transfer cases and letter files of all types.

**SAMUEL WITHERS & Co., Ltd.**  
Stand J.36

**I**N keeping with the title of the Exhibition, this firm are introducing a Coronation safe. This new model will be displayed in conjunction with the existing Samco fire-resisting safes, models of which are available to suit the requirements of many different organizations.



**Secure**

**Durable**

**Efficient**

MORE THAN A CENTURY AGO Milners laid the foundation of the Safe Industry. To-

day, Milners continue to make the most modern and up-to-date Safes and Strong-rooms in the world for their customers in Britain and Overseas.

The same skill and craftsmanship which makes Milners Safes famous, is embodied in Milners Steel Equipment. It is cleverly designed, good to look at and will last a lifetime. Whether you require a complete office suite, or simply need a humble wastepaper basket — get in touch with Milners.

# MILNERS

*The finest Steel Equipment you can buy*

MILNERS SAFE CO. LTD., 58 HOLBORN VIADUCT, LONDON, E.C.1

Telephone: Central 0041/5. Telegrams: Holdfast, Cent, London. Factories: Phoenix Works, Speke, Liverpool. Telephone: Hunts Cross 1281/6



SALES PURCHASE  
GENERAL LEDGERS

*Flexibility* IS THE KEYNOTE

ANALYSES OF ALL KINDS  
PAYROLL & P.A.Y.E. - STORES & COSTS

AND MANY  
OTHER SPECIAL JOBS

In the Mercedes long range of equipment there will certainly be found the right machine to handle any of these problems in the way YOU want it.

**INVOICING?** Cut forms or Continuous length—one copy or a dozen—Totalled or simply written.

**CALCULATING?** In decimals or direct £ s. d.

YOU CAN  
CHANGE  
OVER TO

**MERCEDES**

DURING THIS SUMMER

Ring or write for fullest information

**MERCEDES STERLING**

Bookkeeping and Calculating Machines Ltd  
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## *a NEW personal* INTERCOM SYSTEM



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**SPEECH CONTROL**—is in the form of a bar, inset into and forming part of the base at the front of the master cabinet.

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**MASTER UNIT**—links either six or twelve extensions and contact is established at the touch of a switch, calling being automatic.

**LOUDSPEAKING RECEPTION**—of telephone calls through the master unit avoids inconvenience and wasted time when "holding on".

**STAFF LOCATION**—all the extensions can be called at once from the master unit—but the privacy of each extension is still preserved.

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Manchester Office: Deansgate House, 274, Deansgate, Manchester, 3



MAY, 1953

103



## INDUSTRIAL EQUIPMENT

*Stands are at Castle Bromwich unless otherwise stated.*

**AVELING-BARFORD, Ltd.,** Invicta Works,  
Grantham, Lincs.  
Stands Outdoor 1217 and 1116

**I**N addition to a wide range of road rollers and constructional equipment, Aveling-Barford are exhibiting for the first time their new  $\frac{1}{2}$  cu. yard dumper. It is a three-wheeled machine powered by a  $4\frac{1}{2}$  b.h.p. single cylinder petrol engine. It has been specially designed to work over rough muddy ground and its ability to operate under these conditions is due largely to the employment of a positive gear and chain drive through a differential to large diameter load carrying rear wheels. With the standard hopper, the machine carries 1,350lb. of earth or 7 cu. ft. of wet concrete.

**BASTIAN & ALLEN Ltd.,** Ferndale Terr.,  
Harrow, Middx.  
Stand C.711

**A**MONG the items being featured by this firm will be a Vapor Phase Unit which is used for high temperature cooling and waste heat recovery from internal combustion engines. Using this

system the thermal efficiency of the engine can be doubled with no extra fuel cost and the waste heat recovered in the form of steam.

Other equipment being displayed includes an electrode steam boiler, an electrode hot water boiler, a steam jet cleaner and an industrial oil heater.

**BENFORD, Ltd.,** The Cape, Warwick.  
Stands 1211 and 1110 Outdoor

**W**ITHOUT exception all the exhibits of this firm are of new design and have not previously been shown at the B.I.F. They specialize not only in concrete mixers but also in mechanical wheelbarrows and dumpers.

One of the most interesting exhibits will be a mechanically propelled petrol driven wheelbarrow which visitors will have an opportunity of driving for themselves. It has been designed for use in and out of doors and will negotiate rough and soft ground. The body of the barrow has a heaped capacity of 8 cu. ft.

In addition to this product they

will also feature a half ton diesel dumper and concrete mixers powered by petrol, diesel and electric motors.

**F. H. BIDDLE, Ltd.,** 52, Clerkenwell Close,  
E.C.1.  
Stand B330

**T**HERE will be two new developments on the Biddle stand. The first is a self-contained air conditioner with a cooling capacity up to 9,000 B.th.u.'s per hour. It provides filtered fresh air, ventilation, reduces the relative humidity and removes, when required, the stale room air.

The Dehumidifier is the second piece of equipment and it will effectively extract the moisture in unventilated spaces of up to 10,000 cu. ft. in temperatures from 55 to 90 degrees F.

Besides these new developments, there will be featured the many other heating and ventilating and air conditioning units produced by this company.

**BLACK & DECKER, Ltd.,** Harmondsworth,  
Middx.  
Stand C607

**T**HE complete range of Black and Decker portable electric tools for the engineering, building and motor trades will be displayed, together with two new models. These are the six-inch standard



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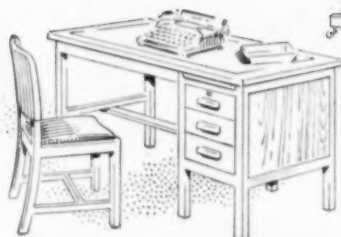
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Executive Chair  
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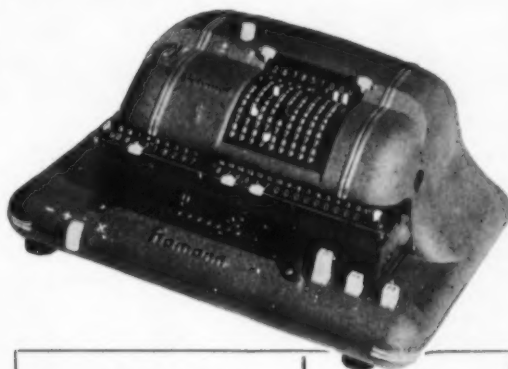
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Swivel Chair  
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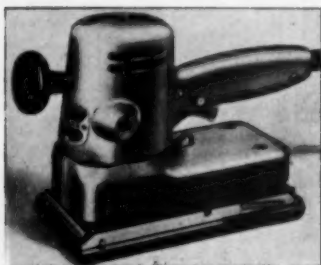
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**Lightweight orbital sander**

bench grinder powered by  $\frac{1}{4}$  h.p. motor and the eight-inch Rip-snorter saw. The latter is a high-speed one-hand saw for cutting timber, cast-iron, brick, corrugated iron, asbestos and ceramics.

In the well-known range of low priced utility electric tools, there will also be a newcomer, the No. 44 orbital sander. This machine weighs only 5 $\frac{1}{2}$  lb.

**BRITISH JEFFREY-DIAMOND, Ltd.,**  
Stennard Works, Wakefield, Yorks.  
Stand D528

**THIS** company will be showing their well-established range of equipment which includes a flex-tooth crusher, a single roll breaker, a swing hammer pulverizer, the

Atomill fine grinder and the microid Atomill fine grinder. Joining these machines will be a newcomer, the intermediate Atomill fine grinder, which has a product range from 50 to 500 B.S. mesh.

**BROOK MOTORS, Ltd.,** Empress Works,  
Huddersfield.  
Stand C.304,

**OVER** the past two or three years Brooks Motors Ltd., been redesigning their electrical products—ac. motors and control gear—with a view to meeting the increased economic pressure from the continent. They have also produced motors suitable for the American and Canadian markets with metric bearings and American threads and dimensions.

Being exhibited are various types of fractional horse-power motors together with control gear including the new hand operated Star Delta drum-type starter which is entirely formed from moulded and pressed parts with silver contacts.

**J. COLLIS & SONS, Ltd.,** Regent Square,  
Gray's Inn Road, W.C.1.  
Stands D625 and 524

**A** FEATURE of this company's stand is their conveyor circuit which includes examples of their various materials handling equipment. This year they have

introduced a special design of finger tray elevator known as the VertiVeyor. This is a synchronous form of elevator which, in this instance, is fitted with an automatic interrupter mechanism to ensure synchronized feed and automatic discharge.

A new model of the LoadaVeyor will also be on view. Other examples from the Collis range will be seen together with their trucks and stackers.

**COLT VENTILATION, Ltd.,** Surbiton,  
Surrey.  
Stand B506

**THE** Colt exhibits will show how their range of industrial ventilators operate and the ease with which they are fitted. A feature of the stand will be a section of factory roof on which different full size Colt ventilators are mounted.

The company promises speedy attention to all enquiries, details of which will be flown back to their head office by their own aircraft.

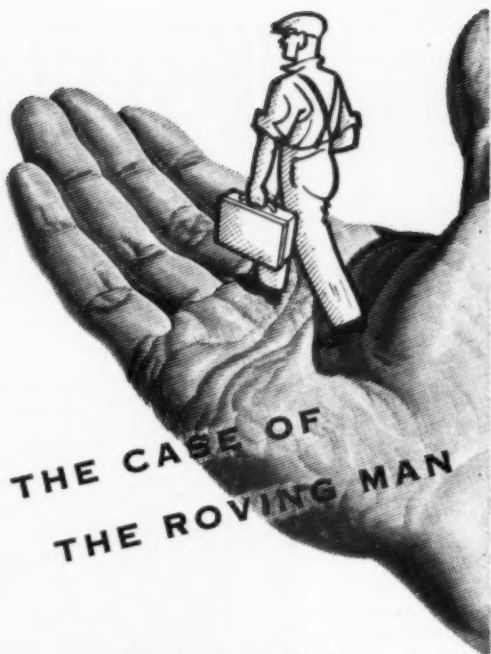
**CONVEYANCER FORK TRUCKS, Ltd.,**  
Liverpool Road, Warrington, Lancs.  
Stands D717 and 616

**THIS** company is again exhibiting on the joint stand of the Owen organization of which it is a member firm. The principal exhibit will be the E2-20 fork truck.

# *Remington*

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Every employer knows this kind of man, maybe knows his family too. Hard working, keen and loyal at heart he wants to stay on at 'the works' but loyalty does begin at home. Give him the extra security he's looking for, and deserves.

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**C. W. CAVE & CO. LTD.**  
59, HOLBORN VIADUCT, E.C.1 PHONE CENTRAL 3778-9.



This is a three-wheel battery electric model which is particularly suited to operation in narrow aisles between factory process points.

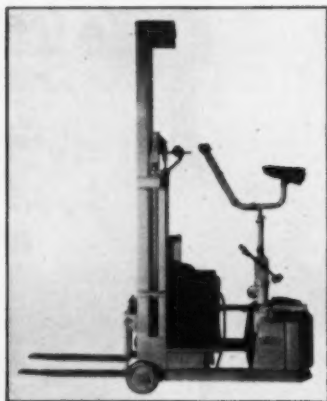
Its size makes it ideal for loading and unloading railway vans and road transport vehicles. The load lifting capacity is 2,000lb. at 20in. load centre, and the stacking height in this case is 12ft.

**R. H. CORBETT & Co., Ltd., Hydrum Works, Burgess Hill, Sussex.**  
Stand Outdoor 1355 and 1254

**T**HE principal item of new equipment to be featured by R. H. Corbett is their Hydruped fork lift truck. This is a small model capable of handling a maximum weight of 1,000 lb. The standard version has a lift height of 8 ft., although it can be supplied with lifts up to 10ft. The hydraulic system consists of a pump driven by a 12-volt electric motor and the method of traction is by a special geared drive from pedals to the main driving wheel.

Another model of interest is the Hydrum High Stacker primarily designed for use in narrow alleyways and for loads which do not exceed 3cwt.

For handling bricks with a fork lift truck, there is the new Bickerstaff brick fork.



**Pedal operated lift truck**

**DALLOW LAMBERT & Co., Ltd., Spalding Street, Leicester.**  
Stand D539

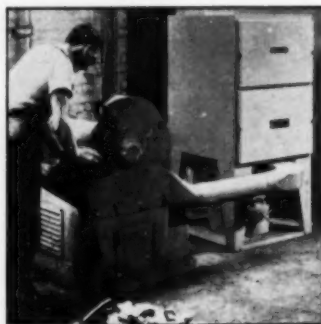
**T**HE emphasis at this stand will be on unit dust collectors. Models will include the Drytex and the new range of Dustmasters which are being exhibited for the first time.

The Dustmaster is an entirely new type of unit dust collector and different sizes are available with a very large variety of fan, filter

and dust container combinations. They are particularly suitable for the metal, woodworking, plastic, tobacco, chemical and ceramic industries.

**DESOUTTER BROTHERS, Ltd., The Hyde, Hendon, N.W.9.**  
Stand C412

**C**ENTRE of interest on this stand will be the Desoutter pneumatic multiple torque units for the simultaneous tightening of grouped nuts. The pneumatic motors used in these units are designed to stall against a controlled



**Dustmaster unit in action**

## NOT A WORD GETS BY...

**N**OT a word spoken will escape the Agaphone dictating machine. Even a whisper will be faithfully recorded and once it's "on the wire" it's there for you to hear as often as you like. The pressure of one finger will start the Agaphone collecting conversation, dictation or the proceedings of an entire conference. Think how valuable it can be to you... saving time... ensuring that meetings and interviews are accurately recorded. The Agaphone will save you money and trouble so it's worthwhile investigating its remarkable capabilities. Ask for a demonstration, it places you under no obligation whatsoever.

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### FACTS

Up to an hour's dictation with the spools of wire held in a foolproof magazine. Can be used for conference recording. Small and compact. Time control enables dictation to be automatically located for playback. Signalling device warns your secretary of remarks, instructions, etc., which are not to be transcribed. Key controls are simple and positive. Handsome appearance. Operates on any voltage and can be used in a car.



### You can use the Agaphone

- To dictate correspondence, notes, memos.
- To record interviews without having to make notes or have a third person present.
- To record conferences so that you can hear them all over again and pick out items to be noted in the minutes or that require to be transcribed.
- To record your thoughts and ideas before they "go cold" or are forgotten.



# SQUEEZING was the answer here...

Every mechanical handling problem has its solution: it is our business to help and advise prospective users as to the particular type of truck best suitable for their needs. The illustrations show two B.E.V. High Lift Fork Trucks in use at a waste paper works. The problem here was how to move very heavy bales without using expensive and space-wasting pallets and how to stack them so as to utilise every inch of space with a ceiling height of only 9 feet. The answer was the 'Squeeze Clamp', an attachment which grips and raises by pressure. This pressure can be regulated to handle the most fragile articles. The height of lift on these trucks was limited to suit the low ceiling height.



May we help you with your particular problem? Our technical staff are always ready to advise you and illustrated literature is available on request.

*We also manufacture Elevating Platform Trucks, Leader Trucks, Tractors, Dock Trucks and Trammer Electric Locomotives.*



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**For quick tightening**

air pressure, and by adjusting the pressure regulator the precise degree of tightening torque is uniformly applied to all nuts. This avoids the risk of over-tightening. These units are powered by the new SR.50 pneumatic motor which develops nearly 3 h.p. with a torque of 500 inch/lb.

The rest of the stand will be given over to showing and demonstrating the many other portable power tools produced by this company.

**ENGLISH NUMBERING MACHINES, Ltd.,**  
25, Queensway, Enfield, Middx.  
Stand B.28 (Olympia)

**C**OUNTERS and numbering machines of all kinds will be exhibited by this firm. Their products include a large range of counting and numbering devices, automatic numbering machines, self-inking daters, type high numbering boxes, meter wheel pinions, as well as precision engraving.

A special feature will be the custom built counting devices using primarily standard production components.

**FERRANTI, Ltd.,** Hollinwood, Lancs.  
Stands C.615 and 514

**T**HIS organization will be displaying a very wide range of electrical apparatus for industrial and domestic use. One of the most interesting items is the high speed tape reader which was originally designed for use with high speed electronic digital computers and which has many applications in the whole field of communication. It is designed to read standard five or seven hole teleprinter tape at the rate of 200 characters a minute.

Another interesting exhibit will be a scale model of the electronic digital computer manufactured by Ferranti under patent licence from

the National Research Development Corporation.

**FISHER & LUDLOW, Ltd.,** Bordesley Works, Birmingham, 12.  
Stand Outdoor 1318

**T**HIS year Fisher and Ludlow's 4,000 sq. ft. site will be covered so that visitors may examine the exhibits in comfort whatever the weather. The major part of the area will be devoted to working examples of their various conveyor systems.

Other equipment to be shown includes pallets, a mobile storage system, a flooring system, a box storage system, clothes lockers, cycle parks and unit construction partitioning.

Part of the structure which roofs the company's exhibits will be constructed of Flowstrut, their new universal slotted angle.

**GENT & Co., Ltd.,** Faraday Works, Leicester.  
Stand C.407

**A** NEW product on this stand will be an industrial bell having an 8in. cast metal gong in which all the mechanism is housed.

A new departure from previous practice in staff locators is also being shown. A staff locator transmitter is now made in a separate unit from the relay cabinet. Neat

## **BOLEX** puts them in the picture

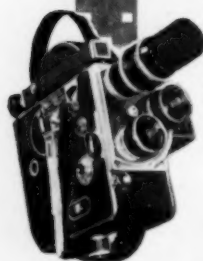
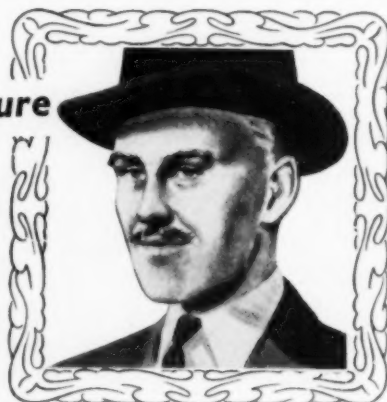
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A key man. He's got all the keenness and enthusiasm in the world—but you can give him something more.

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Nobody knows your business half as well as do you and your executives. You can make your own sales promotion films at surprisingly low cost with a Swiss precision made Bolex—one of the world's great narrow gauge cine cameras. Send for information on the many uses of a Bolex in modern business.



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# **BOLEX**

## **CINE CAMERA**

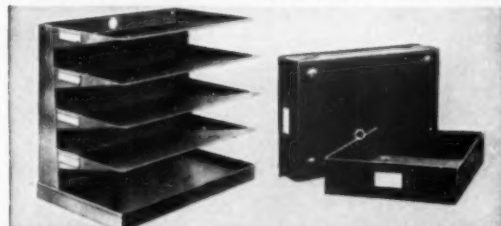
**Harvey**



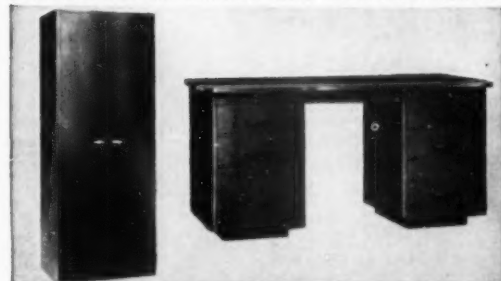
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All Harvey Steel Furniture and Equipment is of modern design, sound construction, and of the highest quality. Finished in Olive Green stoved enamel it is perpetually durable, fire-resisting, and proof against damp and vermin. Prices are competitive. Send for Catalogue No. BU 800.

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**G.A. Harvey & Co. (London) Ltd.**  
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**cut costs —**  
*with Radiant Heating!*

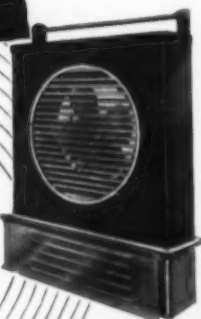
**GOLDEN GLOW**



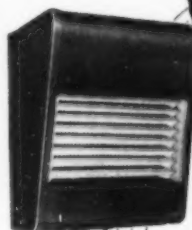
Here is a low pressure suspension heater fitted with Non-Atmos burners that is both efficient and economical. Attractive in appearance, each unit will heat 160/200 sq. ft. of floor space on a gas consumption of 30 cu. ft. per hour.

**AEROZONE**

This economical fuel-less air heater provides adequate working temperature in winter. B.Th.U. output one therm per hour. Generally speaking suitable for heating 25,000 cu. ft. space with three air changes per hour. For suspension or stand mounting.



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The Superttherm Radiant Heater gives maximum trouble-free efficiency for years with the minimum maintenance costs. Each unit heats 300/400 sq. ft. of floor space. No other heater has a higher radiant efficiency.

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System

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**NEW!**

Limitless in its applications . . . easy to use . . . and with its own self-contained store of fadeless waterproof ink, the Flo-master FOUNT<sup>N</sup>BRUSH cuts time and effort wherever quick, legible displayed writing or drawing is needed.

Ideal for use in Stores, offices, studios, factories, etc., for such widely differing purposes as advertisement layout on one hand and the addressing of parcels on the other.

Thickness can be varied between a fine line and a width of  $\frac{1}{2}$ " and the smooth, even, automatic valve feed controls ink-flow to a nicety, merely by degree of pressure . . . and it's so simple. Everyone can find a use for it, even the Managing Director.

Order a Flo-master NOW . . . try it out in the various branches of your business—and you'll be back with a bulk order!

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Send for illustrated leaflet.

Flo-master is complete with two felt nibs (giving three alternative sizes), one bottle of ink and a filler

**24/6**  
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BRITISH MADE  
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## B.I.F. EQUIPMENT SURVEY

and compact, it can either stand beside the telephone switchboard or be mounted on the wall.

Other equipment will include clocks which will form the main feature of the display, fire alarm equipment, watchmen's clocks, marine clocks, liquid level indicating and recording apparatus, luminous equipment, internal telephones, burglar alarms, etc.

L.T.D., Ltd., 95/99, Ladbroke Grove, W.11.  
Stand Outdoor 135b

**T**HE range of materials handling equipment being shown by this firm will include Stacatruc and Aerolift fork lift trucks, Electricar industrial platform trucks, Portal pallet transporters and a selection of ancillary equipment.

A new battery electric model to be seen will be the 45EH/9



The new model Stacatruc

Stacatruc designed to withstand arduous duties in the heavier industries. Materials used in its construction are chosen for strength and durability. No castings are used in the load carrying structure and attention has been paid to accessibility for maintenance. It has a lift height of 9 ft. and the maximum load is 4,500 lb.

POLYGRAM CASTING Co., Ltd., Power  
Rd., Gunnersbury, W.4.

**T**HIS company will demonstrate some of the outstanding features of shell moulding. The most interesting point in this process is the reduction in manual labour and in the case of their exhibit they will be using girl operators. The Polygram shell moulding process was described in an article in the February issue of BUSINESS.

The unit to be shown will consist of an automatic shell moulding

MAY, 1953

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a problem  
we know  
the answers*



Storage Racking? Yes, and every other form of tubular structure yet imagined. Send your problem or write for details.



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**BURGESS Acousti-Booth**

Ever felt awkward on the telephone—unable to catch the client's name or what he was saying to you? Undoubtedly you have! And all the time you knew that the "bad line" (the excuse you probably made for your poor telephone reception) was caused by noise disturbance at your end.

Telephone-frayed nerves become a thing of the past when you install a BURGESS ACOUSTI-BOOTH. Experience the relief of being able to "phone without trouble in the midst of noise. Ask any man who owns one of the many thousands now in use.

Write for Bulletin B.P.16 S.C.B.



Burgess Products Company Limited, Acoustical Division, Hinckley, Leics.

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May we help you? Our wide experience is at your service, and we should be pleased to send you our current catalogue and price list.

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**FIRST AID SPECIALISTS**

Established 1878

## B.I.F. EQUIPMENT SURVEY

machine Mark 5 with a fully automatic roll over of the investment bin and pattern plate.

**RAPID MAGNETIC MACHINES, Ltd.**  
Lombard Street, Birmingham, 12.  
Stand C421

SOME new items of equipment will be included in the exhibits of this firm. Among these will be the new Rapid electro-magnetic vibratory chute type separator designed to treat fine powders and other commodities of similar consistency that require mechanical motion to precipitate their flow.

Many other types of magnetic equipment will be displayed including the Rapid range of electro-magnetic clutches and brakes.

**ROTO-FINISH, Ltd.,** 1, Park Street, W.1.  
Stands D235 and L.6

THIS organization will be showing for the first time at the B.I.F. their medium-size machine for precision barrel finishing. This machine is designed for the full range of Roto-Finish processes from precision deburring, uniform radiusing, descaling, to the final



Gives precision barrel finishing

high quality polishing and honing. Components of all metals and alloys can be processed, large parts being held in fixtures. As the action is gentle and controlled, the process can be successfully applied to batch deburring and polishing of precision engineering components.

**SCIARKY ELECTRIC WELDING MACHINES, Ltd.,** Farnham Road, Slough, Bucks.  
Stand C222

THE PAD.400 heavy duty projection welding machine with a nominal rating of 400-kVA. will

**BUSINESS**

be the outstanding exhibit by Sciaky. This model is claimed to be a complete departure from normal design and to have approximately three times the efficiency of the conventional type.

The machine is fully automatic under push-button control. Secondary current up to 120,000 amps can be obtained across the Tee-Slot Platens.

Other machines being displayed include a pneumatically operated spot and stitch welding machine and a universal seam welding machine.

**THE SPIRAL TUBE & COMPONENTS Co., Ltd.,** Osmaston Park Road, Derby.  
Stand D710

**T**HIS exhibitor's range of unit heaters for operation by steam, hot water or electricity will form the main exhibit on this stand.

Other equipment consists of air heater batteries and coolers for air conditioning installations and process work, diesel engine coolers, transformer oil coolers and the Spiraluxe wall-mounting unit heater which is available for either steam or electric operation.

**VEEDER-ROOT, Ltd.,** Kilspindie Rd., Dundee.  
Stand B.22 (Olympia)

**C**OUNTING devices for all branches of industry will form the display on this stand. A typical example is the pick and hank counter enclosed in a solid die cast case specially designed for the textile industry. Many other models will be seen for a very wide variety of uses.

**WESSEX INDUSTRIES (POOLE), Ltd.,** West Street, Poole, Dorset.  
Stands Outdoor 1234 and 1335

**M**AKING its debut at this year's B.I.F. will be a new battery electric driver controlled fork lift truck which can lift a load of 1,000 lb. to a height of 7 ft. 6 in. Another addition to this firm's range will be a general purpose battery electric works truck capable of handling a 20/30 cwt. load.

Other exhibits will consist of a representative selection of industrial trucks and trailers and hand trucks and trailers.

**WOLF ELECTRIC TOOLS, LTD.,** Pioneer Works, Hanger Lane, W.5.  
Stand C603

**N**EW machines will be exhibited on this stand and at the time of going to press these will include a saw, portable grinder and a die grinder kit. The RS7 saw is a smaller counterpart of the 10-inch model. It has a 7-inch blade, is extremely compact and easy to handle and has abundant power.

The portable grinder is the GQ6, a heavy-duty model powered by a

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Halifax House, St. Augustine's Parade, 1.

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East Moors.

CROYDON—Hall & Co., Ltd., Victoria Wharf.

FOLKESTONE—Hall & Co., Ltd.,  
Junction Station.

GLASGOW—W. Gibson & Co., Ltd.,  
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Gibson, Ltd., 79, Albion St.

MAIDSTONE—Hall & Co., Ltd.,  
Canning Street.

MANCHESTER—Beaumonts  
(Manchester), Ltd., Victoria Park.

ROMFORD—Hall & Co., Ltd., Manor Road.

SOUTHAMPTON—Jenkins & Sons, Ltd.,  
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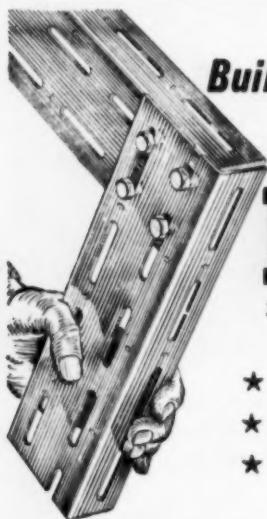
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## B.I.F. EQUIPMENT SURVEY

motor with exceptional high speed torque characteristics.

It is fitted with a resinoid bonded grinding wheel.

Many other tools in the extensive Wolf range will also be featured on this stand.

## WELFARE EQUIPMENT

JAMES NORTH & SONS, Ltd., Godley Mills, Hyde, Cheshire.  
Stand Y.8 (Earls Court)

**T**HREE new products will be exhibited by this firm who have their stand in the plastics section at Earls Court. The first is a heavy duty glove designed for wear in building construction, demolition work, the handling of iron and steel and rough cold or near cold castings, etc. It is made of fabric supported P.V.C. and has a reinforced palm.

The second new product is also a glove—the rib grip model which is designed for non-slip applications such as the operating of process valves, pushing drums, etc.

Other types of gloves and protective garments will also be on view.

PRESS GUARDS, Ltd., 373-378, Farm St., Birmingham, 19.  
Stand D.601

**M**AIN feature of Press Guards at this year's B.I.F. will be their much improved interlocking guard. This will be shown on several different kinds of presses and in each case operation will be under the control of the guard. Guards for hand presses and drilling machines will also be exhibited and a new feature will be a recently developed guard for presses which are fitted with automatic feeds.

QUIZ ELECTRICS, Ltd., 160, High St., Teddington, Middx.  
Stand C.213

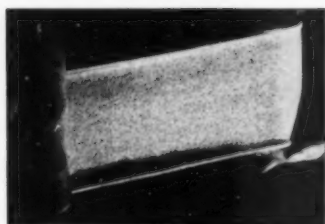
**T**HIS company's range of Handy-Andy driers will be displayed on this stand. These include models for hand and face drying. The manufacturers claim that their special Andyscopic pad, which is fitted to all machines ensures that users are protected from contagion.

Apart from the hygiene point of view these hand driers are also claimed to be exceptionally cheap in operation—75 pairs of hands can be dried for one unit of electricity.

T. J. SMITH & NEPHEW, Ltd., Neptune St., Hull.  
Stand F.10 (Olympia)

**T**HIS firm are well known for their range of Elastoplast

**BUSINESS**



The new porous Elastoplast

elastic adhesive dressings, bandages and plasters.

A new development which will be seen for the first time at the B.I.F. is their porous adhesive elastoplast bandage. Among the lines they manufacture are first aid dressings, plaster, boil dressings, doctors' sets, surgery cases and Elastocrepe bandages.

G. WADDINGTON & Son, Ltd., Newland, Hull. Stand D.123

**I**NDUSTRIAL gloves and protective clothing will form the exhibits of G. Waddington. Their range of industrial gloves covers no less than 400 different patterns and the firm have had over a century's manufacturing experience. The protective clothing is designed for the engineering, ship building, iron, steel, gas and other heavy industries.

G. P. UDAL, Interlock Works, Port Rd., Birmingham, 12. Stand D.630

**A** WIDE variety of machine guards of various kinds will be seen on this stand and demonstrated. These will include Fastrup guards with arrestor mechanism fitted to power presses. This model is worked by compressed air and both the guard and the clutch are synchronized to ensure split second timing.

## CANTEEN EQUIPMENT

ALMAG ENGINEERING Co., Ltd., 46, Pembroke Road, W.11. Stand A.629

**A** USEFUL product of this company that makes carving of meat and poultry easier and less wasteful is the cast aluminium meat dish. This has a raised centre portion fitted with pointed studs which grip the meat as it is carved. Also shown will be a polished aluminium waffle iron.

CALOMAX (ENGINEERS), Ltd., Brunswick Terrace, Leeds, 2. Stand B.718

**A** DDITIONAL models in the range of instantaneous water boilers produced by this firm will be shown for the first time at

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## B.I.F. EQUIPMENT SURVEY

Birmingham. One of the new models is the Minor which has been produced specially to meet the demand for limited outputs of boiling water in industrial canteens and at tea points in factories. The boiler is only 18in. high and produces nine pints per minute at steam pressures of between 10 and 60lb. p.s.i.

Other models in the new range give outputs of 16 or 22 pints per minute.

**CONCENTRIC MFG. Co., Ltd., Tyburn Road, Birmingham, 24. Stand D.222**

THE products of this company are designed to reduce the amount of manual work necessary in running a large works canteen. Automatic and hand-operated machines are available for moulding pies and tarts and for slicing bread; other machines can be supplied for washing, rinsing and drying cutlery and glassware.

**PRESTONE COOKERS, Ltd., Fort Works Wolverhampton, Staffs. Stand A.513/410**

THE advantages of using pressure cookers are now well known. Food is prepared much more quickly and preserves more of its natural flavour and quality. Models specially designed for use



Catering model and accessories

in restaurants and canteens will be featured on this stand. A hundred three-course meals can be prepared for sit-down consumption with only four of these cookers. It is claimed that fuel consumption is reduced by 75 per cent. when pressure cooking is employed instead of the more normal methods.

**STAINLESS STEEL SINK Co., Ltd., Ring Road, Lower Wortley, Leeds, 12. Stand D.312**

A RANGE of stainless steel sink units specially suitable for use in industrial canteens is produced by this firm. In many cases, steel draining boards are an integral part of the sink unit. Their smooth design and finish ensures that food is prepared under the most hygienic conditions. The stainless steel makes the equipment highly resistant to corrosion and wear.

**W. & G. Sissons, Ltd., St. Mary's Road, Sheffield, 2. Stand B.507**

NEW additions to this firm's range of round bowl stainless steel sinks will be launched at this year's B.I.F. Advantages of the round bowl construction are that they are easier to manufacture and therefore cheaper to buy and very easy to keep clean. Models with one-piece single or double draining boards and large or small round bowls will be shown, together with different sizes and shapes of rectangular bowls.

**BERTRAM THOMAS (ENGINEERS), Ltd., Worsley Street, Hulme, Manchester, 15. Stand D.309**

WITH the aid of the Electric Buffet displayed on this stand, meals can be kept hot and palatable for long periods. It is especially useful for transporting food from the kitchen to an executive dining room some distance away.

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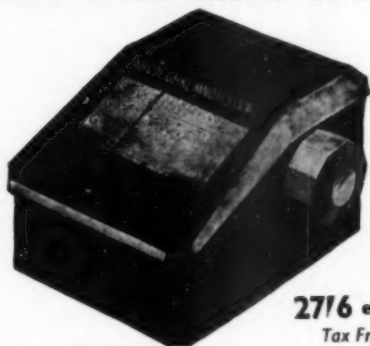
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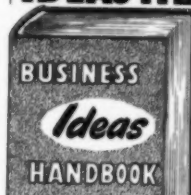
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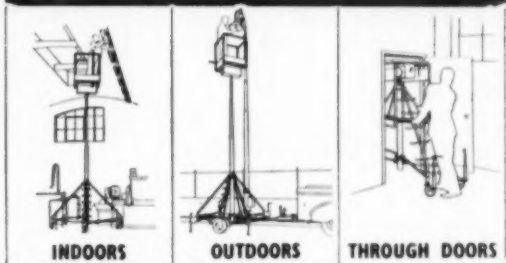
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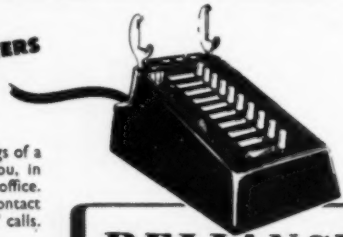
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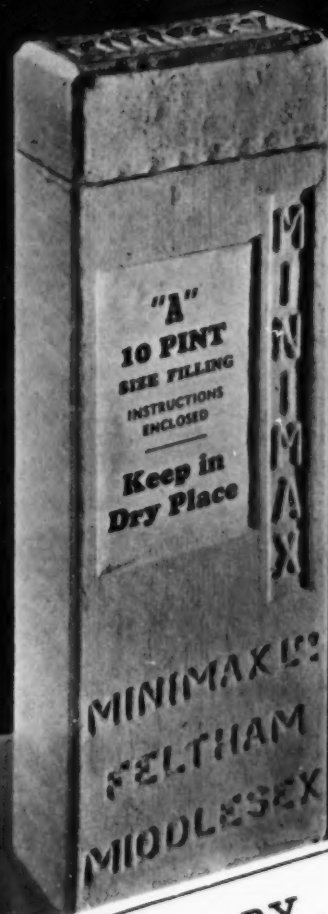
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